DISTINGUISHING BETWEEN INTENDED AND PERCEIVED EMOTIONS IN A 'DANCE-BASED' PHYSICAL THEATRE PERFORMANCE

by

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DEDICATION

I dedicate this study to my loving parents, Marlene and Marius Papenfus who have continuously supported me through the process of this study. Thank you for your unconditional love and for encouraging me to keep pursuing my dreams.

Without you, none of my success would be possible.

I love you.

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TO WHOM IT MAY CONCERN

This is to state that the Masters Dissertation: 'Distinguishing between intended and perceived emotions...' (text only), submitted to me by Ms Z Papenfus (student no: 14139881) of the University of Pretoria, South Africa, has been language edited by me, according to the tenets of academic discourse.

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ABSTRACT

Dance-based physical theatre as a sub-strand of Physical Theatre, is positioned as a continuum of dance. Dance-based physical theatre performers are encouraged to embrace their personal uniqueness and previous dance training, when creating and expressing movement. The intended meaning embedded in dance-based physical theatre is often misunderstood or not grasped by audience members. This study incorporates emotion into a dance-based physical theatre performance to determine whether audience members are able to perceive the emotions as intended by the choreographer and portrayed by the performer. The thesis statement of this study is that both the meaning as well as the intent of a physical theatre performance can be enhanced through the incorporation and deliberate application of emotion. The investigative question of this study is: *How does an audience perceive and distinguish the intended emotions in a dance-based physical theatre performance?*

The aim of this study is to determine whether a South African audience can perceive the intended emotions portrayed in a dance-based physical theatre performance.

This study suggests that there are two primary scholarly discourses relating to how human beings perceive emotions in themselves and in others. One discourse regards emotion as humanly congruent, suggesting that humans are able to express and perceive emotions such as fear, anger, disgust, happiness, sadness and surprise, regardless of cultural and personal differences (Roether *et al*. 2009:1); the second discourse regards emotion as personally unique, suggesting that cultural differences, as well as personal circumstances and unique bodily and facial features play a role in how emotion is expressed and perceived (Masuda *et al*. 2008:378). These two discourses on emotion are considered throughout the study. It is further suggested that emotion is perceived through 'four domains' namely: facial expressions; body attitude and orientation; breathing patterns; as well as voice and sounds that are produced.

This study draws on qualitative, quantitative and practice-based research approaches in order to answer the investigative question. Elements of accepted scholarly approaches, such as: Effector Patterns (EP) drawing on the work of Bloch (2015) and Bond (2017); Laban Movement Studies (LMS) drawing from the Effort Elements and Factors, as well as the Shape category (Wahl 2019; Bradley 2009); and Lessac Kinesensics (LK) drawing from the

body NRG's[1] (Lessac 2019; Lessac & Kinghorn 2014) are integrated to formulate 'three strategies' to facilitate the embodiment of three emotions: anger, fear and disgust. These three emotions are portrayed randomly throughout the dance-based physical theatre performance choreographed specifically for this study. Combining the two opposed discourses concerning emotion turned out to be valuable.

This study concludes that emotion in performance comprises both humanly congruent and personally unique aspects. A significant number of audience members perceived emotion through both a humanly congruent and a personally unique lens. The audience recognised the different emotions portrayed in the performance. The final conclusion of this study was based on the analysis of the raw data collected by the Mobile Application that was specifically designed for this study. It was deduced from the analysed data that 51% of the audience members perceived more than 50% of the emotions that were portrayed in the performance. The conclusion my thus be drawn that emotion is both humanly congruent and personally unique, and that the intent of a dance-based physical theatre performance can possibly be enhanced by embracing and applying emotion.

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[1] Neurological Regenerative Growth

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CHAPTER ONE: CONTEXTUALISING THE STUDY

Situated in the field of physical theatre and more specifically, in the area of dance-based physical theatre, this study focuses on the use and application of emotion in performance. It investigates how emotion is perceived and recognised by an audience. It is, as such, necessary to define the field of physical theatre as applicable to this study.

1. Physical theatre

The term physical theatre, has become a "catch all phrase" as it incorporates many movement-based theatre forms with strong visual dimensions, focusing on the physicality of the performers (Callery 2001:6). Physical theatre has been used to collectively represent works where narratives unfold through physicality rather than verbal language (Sanchez-Coleberg 1996:40). Physical theatre is placed closer to a conceptual paradigm rather than to a specific form, making it a unique approach to movement in making theatre (Finestone 1995:32). Physical theatre is implied to differ from dance due to the conceptual narrative and themes that derive from the movement executed by physical theatre performers whereas in dance, movement forms images that may lack meaning and narrative but focus on the aesthetic and technical precision of the form itself.

Verbalisations and vocal sounds may be present in physical theatre; however, due to the limited use or absence of verbal communication[1], physical theatre primarily relies on an embodied relationship between experience and observation. According to Callery (2001:3-4), physical theatre does not discard intellectual demands, but intends to facilitate cognition through the physical engagement of and with the performer's body, creating or portraying a narrative. It is therefore suggested that physical theatre is a performance mode devised by the choreographer to stimulate a visceral response in the audience which they may consciously or subconsciously recognise.

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[1] It is acknowledged that certain theatre and physical theatre companies focus on heightened physicality in producing full-length textual plays or monologues. Examples of these are SITI Company, DV8 Physical Theatre, and Frantic Assembly. These examples attest to the wide scope of the physical theatre genre. For the purpose of this study, I am referring to a small section of physical theatre, which I coin dance-based physical theatre (see 1.1) where full-length text/plays are not often used and incorporated. The play or text may, however, add to the research prior to devising a piece. If text is incorporated, it is abstract or a selection of repeated words and/or sounds that create context and add to the narrative. In this it is noted that physical theatre draws from a range of discourses including theatre, dance, and performance studies.

Bodyminded impulses and experiences expressed through a heightened physicality and in turn, resonate or respond to corresponding internal and external environments are incorporated in creating physical theatre (Lecoq 2006:6). Such heightened physicalities primarily manifest through full body expressions that primarily consist of full body shaping, postural movement, gestures[2], breath and facial expressions, executed with intent in time and space. Physical theatre extends beyond verbal narrative, integrating both visual and physical elements manifesting character, narrative, and relationships, even if the narrative presented in the performance is not linear nor chronological (Barton 2005:114-115; Lewis 2010:177).

Since physical theatre performances rely on somatic[3] impulses and expressions rather than cognitive thinking (Callery 2001:4; Lewis 2010:177), it intimately draws on emotional experiences (Lecoq 2006:6)[4]. Adrian (2008:20), similar to Callery, states that "acting on impulse" is the "mastery of whole-body responsiveness to stimulate expression from moment to moment." Personal and organic responses are therefore expressed in a physical theatre performance. Furthermore, physical theatre often highlights issues of similarity and difference by questioning how and at what point in performance do bodies "evade and transcend the cultures that have nurtured and shaped them?" (Murray & Keefe 2007:199).

Gary Gordon is considered the father of physical theatre (Finestone-Preag 2010:29) in the "local form of training, practice and performance" in South Africa (Sichel 2010:41). Gordon contributed to the nurturing and shaping of physical theatre in South Africa. Gordon founded the First Physical Theatre Company[5] in Grahamstown in 1993 through integrating his experience of the latest European physical theatre styles into choreographic research and training as well as conceptual performances (Sichel 2010:42). Through this, South African physical theatre has evolved from a "torso tackling, emotionally draining form"; to enriching and expanding "the contemporary theatre dance repertory" (Sichel 2010:43).

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[2] According to Hostetter and Alibali (2008:495), gestures emerge from "perceptual and motor stimulations that underlie embodied language and mental imagery". Knowledge is deeply tied to the body as the body is the expresser of feelings and cognition.

[3] According to Corwin (2012:38) the term "'soma' does not mean 'body'; it means 'Me, the bodily being'". Taking this definition into consideration, it can be concluded that the impulses that inform dance-based physical theatre stem from subjective feelings that are portrayed through the use of the body's physicality. The movements of each individual will thus be different due to lived experiences and habitual patterns.

[4] Lecoq (2006:[sp]) states that the body is aware of aspects and characteristics the mind is ignorant of.

[5] The First Physical Company created performances through integrating various theatrical elements to create aesthetics and local textures (Sichel 2010:43).

Furthermore, the physical theatre genre in South Africa is shaped and influenced by a number of hallmarks/contributors such as: heightened physicality, corporeal mime, exploration of cultural heritage, use of multimedia, clowning, themes of identity, comedic sub-strands, and formal theatre dance, to mention a few (Sichel 2010:43-48). According to Coetzee and Munro (2010:10) physical theatre in South Africa focuses on the body in relation to theatre/drama/performance, self-exploration and on the socio-cultural and historical contexts of the performing body.

Fleishman (1997:201) asserts that 'movement' in South African theatre "ranges from formal choreographed dance sequences…to elaborate physical gesture existing alongside and interwoven with the words of the text" to physical images consciously conceived by the director and/or performer to "replace words completely where words have become simply insufficient". Fleishman's statement resonates with what was previously mentioned about verbalisation often being absent in physical theatre as well as physical theatre being influenced by many different styles, blurring the lines between theatre, performance and dance.

Physical Theatre in South Africa, therefore, comprises of theatre, dance and performance that in turn stimulated contemporary dance in South Africa (Sichel 2010:44-49). However, according to Finestone-Praeg (2010:30), "physical theatre is continually rehearsing its freedom from the perceptual politics of traditional theatrical representations" through experimenting with "traditional narrative structures and deconstructing known dance and theatrical codes and languages". Often denying a specific categorisation, physical theatre is transforming and revolutionising performance through the emergence of new generations of artists with their own creations, collaborations, and cross-pollination of theatre, dance, and performance styles (Sichel 2010:49-50). It is therefore implied from the information above, that the unifying characteristics of physical theatre are methodological rather than stylistic as the actor or performer is often positioned as the creator rather than the interpreter[6].

Hence, the performer's dance and socio-cultural background play a major role in how movement is devised and executed. My dance background in Ballet and Contemporary dance has an influence on both my choreographic and devising[7] of physical theatre as well as my

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[6] The choreographer or director is not the sole creator, the performers are often involved in devising.
[7] Devising can also be referred to 'collaborative creation' (Heddon & Milling 2016:3).

perception of physical theatre. I view physical theatre as a continuum of dance, informed by my dance training, therefore I refer to dance-based physical theatre as discussed below.

1.1 Dance-based Physical Theatre

In order to define dance-based physical theatre, a general description of the key components of dance is provided, followed by a perspective as to how physical theatre relates to, or differs from dance.

Dance "recapitulates the act of creation" in each performance and more so confronts the audience "with the mental concept and the vibrant actuality merged into one image" (Marsicano in Sorell 1951:238)[8]. An image of time is created by the dancer through movement. The image is changed or transformed as time is prolonged or arrested. The essence of dance is formed by the combination of environment and ambiguity, making each dance unique due to its open-ended interpretation (Marsicano 1951:239-241). The open-ended interpretation of the image in dance, informs dance-based physical theatre as the audience are presented with raw images that relate to the theme and narrative[9]. Winearls (1990:viii) states that the art of dance operates at the highest level of visual art, as physical expression is only possible through the fundamental laws of structure and function. This perception specifically aligns with classical dance. Physical theatre makes use of physical expressions and can be perceived as developed, and on a continuum from dance, which as an umbrella term includes a wide scope of various genres and styles, starting with classical dance[10].

Dance, according to Carr ([Sa]:59-60), is the language of movement[11] and through dance a dancer interprets a script, text or narrative; relating back to Fleishman's (1997:201) statement of words being replaced with movement and gesture. This statement indicates the developmental trajectory of dance from classical to current free form practices, such as physical theatre. Dance today is referred to as an embedded performative art (Preston-Dunlop

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[8] It is acknowledged that this source is dated; however, it is relevant to note that dance stems from a rich history that aimed to capture the essence of reality into visually pleasing motions. These visuals were choreographed to present a narrative, along with beautiful technique to the audience. The art of dance has since then evolved into various dance styles that still confront the audience with relevant themes.

[9] As mentioned previously, physical theatre is not fixed or stable, but ever evolving.

[10] An in-depth discussion of the various genres and styles of dance falls outside the scope of this study.

[11] According to Studd and Cox (2013:125) movement is the medium through which humans interact, making movement the most basic experience of life. Movement of the body is an experience all humans share, yet every individual has "a unique movement signature" (Studd & Cox 2013:125).

& Sanchez-Colberg 2002:2-3), implying that dance is intricate and deeply rooted in expressive movement that stems from emotions. Similarly, Hanna (2016:[sp]) suggests that dance is a "multifaceted activity" coordinated by the brain and the body to perform "complex, precise movements that express emotion and convey meaning". Aligned with Lecoq (2006:6), Preston-Dunlop and Sanchez-Colberg (2002:7) state that dance is a practice of embodiment, thus referring to the developmental trajectory that includes Physical Theatre.

Unlike dance in the narrowest (and perhaps most classical) sense of the word, dance-based physical theatre moves away from the technical demands of dance styles, such as Ballet, Contemporary dance and Modern dance, to mention a few[12]. Some physical theatre performers who started off with classical dance training do, however, draw on their previous dance experience and technical training by incorporating their unique style into their movements, resulting in dance-based physical theatre. Dance-based physical theatre, as a continuum of dance, is considered to be ambiguous toward the representation of certain references and it may seem unstable in meaning, but the significant and animated movements are fundamental to dance-based physical theatre's own specificity (Martin 2004:48). Dance-based physical theatre extends beyond verbal language, giving an expressive dimension to independently conceived ideas, themes or narratives[13] (Carr [Sa]:60).

Minton and Faber (2016:92) offer a seminal description of dance-based physical theatre. They state that "movement is the embodiment of thought - in which movement and thought work together in describing the person's response to the world". This statement aligns with that of Finestone-Praeg (2010:30) when she proposes that physical theatre has an embodied presence as there is a sense of freedom where the performer interprets his/her own movements. Finestone-Praeg (2010:30), similar to Studd and Cox (2013:125), mention that each choreographer "has a distinctive signature that marks his/her aesthetic". At this point, it is noted that the interpretation of specific dance styles, such as Ballet and Contemporary

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[12] Ballet and Contemporary dance influence my physical theatre and choreographic style. Depending on the mover's dance background, other dance styles such as Hip hop, Jazz, Freestyle, and Spanish, along with other styles, may have an influence on dance-based physical theatre. These styles are not discussed as they do not have a direct impact on my style of physical theatre, nor do they influence the physical theatre style of the three movers' I used in this study.

[13] It is acknowledged, as mentioned previously, that verbal text is included in some physical theatre performances. However, for the purpose of this study text was not used.

dance[14], play a vital role in how I as choreographer navigate choreography to portray narrative, emotion and characters. In turn, this affects how narrative, emotion and characters are perceived by the audience. It is therefore implied that dance-based physical theatre is very similar to the definition of dance; yet, there is more freedom as there are no specific techniques that need to be followed and no set movements that need to be executed in order to fit into a specific dance genre, such as Ballet and Contemporary[15] dance styles[16]. Herewith, referring to what was earlier mentioned about physical theatre denying a specific categorisation and continually rehearsing its freedom from the various representations of dance, performance and theatre (Sichel 2010:49; Finestone-Praeg 2010:30). Dance-based physical theatre accepts the lens of techniques that are reflected in the body of the performer due to the influence of previous dance styles.

Similarly, Studd and Cox (2013:125), as mentioned above, suggest that each human moves in a unique signature. The unique signature relates to the Bartenieff Fundamental principle of 'Personal Uniqueness', stating that all human beings are different in the way they move and perceive certain contexts due to their individual phenomenological experiences (Hackney 2002:48). In light of the above, dance-based physical theatre, for the purpose of this study, is the expressive movement and shaping of the body, drawing on dance and physical theatre[17].

Lepecki (2004:47) suggests that dance performances aim to hold a mirror up to life, therefore the audience are not viewing the experience of another but rather using the performance presented on stage as an event to reflect upon themselves. The reflective activity occurs during and after the performance. Dance-based physical theatre performances aim to produce self-understandings, or concepts of identity based on a situation of seeing some other within a specific context or living within specific circumstances. This makes it possible to reflect upon certain depictions of the world, as well as how the world is depicted by the choreographer

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[14] Although these dance styles are about image and form, there is a desire to portray narrative and emotion. This is seen in the Ballet d'action of the 18th century and the development of American modern dance in the early 20th century.

[15] As Gordon states in the discussion with Finestone-Praeg (2010:31), various techniques devised and taught by Martha Graham, Doris Humphery, and Merce Cunningham to mention a few, are helpful in the way "they open up certain ideas about movement, or ideas about performance...". These all form part of my Contemporary dance training background. All the techniques form an umbrella for Contemporary dance as a style.

[16] Ballet and Contemporary dance forms the lens through which I choreograph physical theatre as I have extensive training in these two styles. It is also acknowledged that Contemporary dance is, like physical theatre, ever evolving, yet based on my training background there are still technical elements that need to be adhered to.

[17] This is reflected upon in chapter four of this study.

(Lepecki 2004:47). Once again, this speaks to how the lines between dance, physical theatre and performance are blurred.

La Viers, Teague and Egerstedt (2007:4) describe their process of creating and expressing as follows: "We adapt. We invent. We control. We play."[18]. This statement aligns with my personal description of dance-based physical theatre, as it is a continuum of dance and art that provides room for a natural sense of movement and personal expression, while portraying a narrative that relates to the audience. The performers are encouraged to embrace their personal uniqueness and previous dance training when creating, expressing and shaping movement. The choreography is invented through tasks which can be referred to as "playing"; the choreography is adapted and controlled by the choreographer to suit the choreographer's vision for the performance.

In order to clearly communicate the narrative and to possibly enhance the quality of the movement, emotions are embodied by the dancers in this study. The use of emotion within this dance-based physical theatre performance draws on my previous study, which is briefly discussed in the section below.

1.2 Previous research leading into this study

In my Honours study, preceding this project, I explored the embodiment of emotion in 'dance-based 'physical theatre by employing the effector patterns provided in Alba Emoting[19]; an acting technique developed by the neuroscientist, Susana Bloch, as well as supporting material from Lessac Kinesensics and Laban/Bartenieff Movement Studies. Emotion can be considered as a manifestation of neurobiological[20] and socio-cultural processes. Bloch (2015:75) refers to six "basic emotions" namely: sadness, joy, fear, anger, erotic love and tenderness[21]. To oscillate between the basic emotions, Bloch adds a seventh pattern termed "step out", used to get the bodymind back to a neutral state through optimal alignment, slow, deep breathing and

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[18] This relates to physical theatre as method of devising, as previously mentioned the performer is positioned as creator rather than the interpreter.

[19] Alba Emoting enables performers to generate emotional states using only physiological experiences, allowing the performer to physically connect with emotion through the use of breathing patterns accompanied by body expressions and facial expressions (Bloch 2015:246).

[20] Neurobiology is the study of the brain, more specifically the organisation of the cells of the nervous system into functional circuits that process information and impact behaviour (William 2018:[sp]).

[21] Bloch refers to these six emotions as basic, but other neuroscientists define other emotions as basic. The purpose of this study was not to determine what basic emotions are.

the release of facial tension (Rix 2001:209). The step-out equates to the de-roling[22] in other approaches. The six basic emotions along with step-out are embodied by the use of effector patterns[23], which are physiological shifts made in the body, face and breath.

I chose the effector patterns to crystallise the emotional embodiment of a solo performed by myself, concentrating on three of Bloch's basic emotions. These were anger, fear and erotic love. I chose these emotions because of my personal discomfort with embodying them in my daily life, as an Afrikaans South African woman. The hypothesis was that the emotional quality of the dance-based physical theatre piece can be enhanced through the application of effector patterns to enrich the experience of both the performer and audience. After analysing my video recordings made of the baseline performance and of each embodied emotion, I found the hypothesis of the study confirmed; Bloch's techniques combined with the work of Arthur Lessac and Rudolf Laban can be used as a tool to crystallise emotional expression in dance-based physical theatre, thereby influencing the way choreography is executed.

Whilst my previous study focused mainly on the neurobiological aspects of emotion and how the embodied expression of three emotions influenced my own performance, this current study aims to determine whether an audience can observe and distinguish emotional expressions and shifts in a dance-based physical theatre performance. This study will investigate how emotions expressed by the performers are observed and perceived by an audience in a dance-based physical theatre performance. The following section will discuss the problem statement associated with the study.

1.3 Problem Statement

Emotion is, and is perceived as an essential part of human existence and survival. Emotions and feelings are interrelated. Feelings manifest multiple shifts in the body due to the body's response to a stimulus (whether internal or external), which, in turn, leads to the expression of the emotion (Damasio 1999:282). Evidence exists that emotion is formed objectively by the same neurological system in the brain, irrespective of cultural conditioning (Damasio

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[22] De-roling refers to the process of releasing a character, emotion or role as portrayed or embodied by the performer.

[23] For this study I combined scholarship from books publicly available, and various articles in journals accessed via searches. I drew on the elements of the Effector Patterns shared in scholarly discourse to apply in relation to Lessac Kinesensics and Laban Movement Studies. I intend to enrol for courses to extend my training in these approaches. I have completed a Lessac Kinesensics Intensive course (2017) as well as Laban Movement Studies Introductory workshops (2016 & 2018).

1999:282). By contrast, studies emanating from the field of cultural neuroscience[24] indicate that human emotion and the expression thereof is unique to each individual.

Given these contrasting views, this study questions whether an audience can recognise the deliberate choice and use of emotion expressed in a dance-based physical theatre performance. Are the interpretations and perception of the emotions by the audience aligned with the emotions that are portrayed by the dancers in the performance?

Silveira, Gualda, Sobral and Garcia (2002:119) assert that dance is an interpretive form of art as there is a creative process that is personally unique to each choreographer/performer. Some choreographers and performers have doubts whether the performance will carry across the message or narrative as intended during the creative process[25]. This aligns with the main purpose of the study, which is to determine whether the audience is able to perceive the emotions that are portrayed throughout the performance.

Choreographers choreograph dancers to portray specific emotions with the purpose and intention of making an impact or conveying a message to an audience. Performances are thus choreographed with a specific message, expressing specific emotions intended to arouse feelings in the audience. Can an audience observe, recognise and distinguish the emotions performed and portrayed by the dancers as intended by the choreographer? In order to address the problem statement, the following section will discuss the research aim and investigative question.

1.4 Research Aim and Investigative Question

The aim of this study is to determine whether South African audiences can perceive the emotions intended by the choreographer in a dance-based physical theatre performance.

This leads to the investigative question of the proposed study: *How does an audience perceive and distinguish the intended emotions in a dance-based physical theatre performance?*

In order to answer the investigative question certain sub-aims need to be addressed:

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[24] According to Kitayama and Park (2010:111), "cultural neuroscience is an interdisciplinary field of research that investigates interrelations among culture, mind and the brain".

[25] Audience members have their own personally unique lens, which is valid when interpreting the performance. It is important to give the audience clear "cues" if the choreographer/performer/director intends to put forward a specific context and narrative.

- Defining emotion, interrogating the two primary scholarly discourses on emotion pertinent to this study;

- The perception of emotion in daily life and by audience members;

- Data collection process and the mobile application; and

- The outcome of the data interpretation.

The research processes explained in the section below will be executed accordingly, in order to achieve the sub-aims leading to the answer of the main investigative question.

1.5 Methodology

This study is primarily placed in a qualitative research field and is accompanied by quantitative and practice-based research in order to answer the investigative question. Qualitative research is a form of research that mostly concerns aspects of the arts (Munro 2015:51). Practice-based research, according to Candy (2006:1), derives from a creative artefact constructed to contribute to the knowledge that is needed to answer an investigative question. The dance-based physical theatre performance, for instance, is the practice-based artefact in this study. It is, however, not assessed on any level; it serves as a means towards answering the investigative question. Quantitative research involves the use of numerical data and experimental designs (Mertens 2015:xvii), and is employed in the final phases of the study. This will be elucidated below[26].

According to Newman and Ridenour (1998:9) behavioural research[27] is a combination of both qualitative and quantitative research. Quantitative research falls under statistical studies that include ways that are more traditional, where investigations were carried out by the psychological and behavioural sciences (Newman & Ridenour 1998:10). By using elements of quantitative research, I am able to determine how many audience members perceived the emotions intended and portrayed in the performance. The research process, discussed in the following section, provides the different phases involved in this study, thus providing a clear

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[26] See Participants Involved on page twelve, where this process is explained.
[27] Studies that explore the "developmental, social and industrial psychology, neuroscience, memory, language and cognition" of the human (Behavioural Studies 2018:[sp]).

description of how the different research methods were combined to answer the investigative question.

1.6 Research Process:

1.6.1 Phase One: Review of scholarship - emotion; audience perception of emotion

Phase one entails a review of scholarship regarding emotion, the perception of emotion, and specifically audience perception of emotion. These discussions are necessary for developing an understanding of emotion and the perception thereof, which contributes to the aim of this study. Key theorists, such as Susanna Bloch, Paul Ekman, Robert Plutchik, Antonio Damasio, Sara Ahmed, Laura Bond, David Rose and Tanya Clarke's work will contribute to the discussion. Phase one will be reported on in chapters two and three of the thesis. In order to determine whether the audience can perceive emotion as intended by the choreographer, a dance-based physical theatre piece had to be choreographed. The choreography forms part of phase two, as discussed below.

1.6.2 Phase Two: Choreography

A thirteen-minute dance-based physical theatre performance with a narrative that is situated within the South African paradigm was choreographed for this study. The performance is the practice that this research is based on. The narrative deliberately included three primary emotions: fear, anger and disgust [28] randomly repeated throughout the duration of the performances.

Phase two includes my choreographic process, which is reported on in chapter five under the following headings:

• Choreography and choreographing a performance;

• Finding a source: beginning my choreographic process;

• Devising movement and generating a narrative from the source;

• Performer's role in the choreography;

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[28] Disgust does not form part of Bloch's basic six emotions, but other theorists do acknowledge disgust as a primary emotion. This will be discussed in chapters two and three.

- Active process perceived by me as choreographer;

- Spatial designs and scenic devices;

- Forming and shaping the choreography with intended emotions;

- Music and sound in the choreographic process; and

- Refining the choreographic choices.

Following the choreographic process is the data collection and analysis process, which forms part of the next phase of the study.

1.6.3 Phase Three: Data collection and interpretation

Phase three includes the data collection process, which involves the tool that was designed for this study, the mobile application. After the raw data were collected, elements of quantitative research were used, such as basic statistics, to analyse the data. The following section briefly discusses the mobile application used to collect the data for this study.

1.6.3.1 Data Collection: Mobile Application

A 'tool' was needed to investigate whether my study has been successful. For this purpose, a mobile application was designed by a qualified IT technician[29] to:

1. ensure anonymity of the audience members by issuing a "user number" as they open the mobile application and press start; and

2. collect and store the data as obtained from the audience responses.

This tool will be discussed further in chapter five.

1.6.3.2 Collection Process:

The audience downloaded the mobile application using a URL (Uniform Resource Locator) given to them before the performance commenced. The mobile application presented three tabs for each emotion: fear, anger and disgust[30]. The mobile application was synchronised with

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[29] The technician was Steven Lance Walgenbach, a seasoned IT developer.
[30] Refer to chapter five to see the figures of the application.

the timing of the performance. The moment the audience perceived and distinguished between the three emotions, they had to tap the relevant tab identifying the emotion that was portrayed on stage at that given moment. The data were stored in a separate data file to which only the researcher had access to, to review at a later stage, after the performance had taken place.

1.6.3.3 Data interpretation:

The data collected by the mobile application were analysed and critically reflected upon to answer my investigative question on how emotion is perceived and distinguished in a dance-based physical theatre performance. Basic statistical techniques were applied in this phase, in order to analyse the raw data that had been collected, which led to the summation and conclusion of this study. Chapter five reports on this phase of the study.

1.6.4 Phase Four: Summation and conclusion

This is the final phase of the study, discussed in chapter six. The answer to the main research question of whether the audience could distinguish between the three different emotions in the dance-based physical theatre performance, is revealed.

The study involved a number of participants in order to answer the main research questions. Ethical clearance was therefore needed in order to commence with the study. The section below will discuss the ethics number.

1.7 Ethical clearance

The research of this study was executed according to the ethical principles of conducting research that relies on human participation. This study followed the ethical guidelines as set by the University of Pretoria. The research proposal was approved by the Ethics Committee of the University of Pretoria before the commencement of the collection of the data. The ethical clearance number is GW20181109HS. Information leaflets and letters of consent were provided before the commencement of the practical sections of the study to the following participants:

1. The three dancers who were part of the choreographic process and executed the choreography during the two performances (see information leaflet and letter of consent in Appendix A); and

2. Audience members before the commencement of the performances (see information leaflet and letter of consent in Appendix B).

The aforementioned letters of consent were signed by the participants as applicable before the relevant sections and form part of the raw data. In accordance with University policy, the raw data will be archived for a period of five years at the Drama Department, Room 2–16. Should any person want to access the data in storage again for further research, participants' consent must be sought in writing.

A description of the participants and their roles in the study are provided below.

1.8 Participants Involved:

1.8.1 Researcher as choreographer:

Choreography is accepted as a personal experience, therefore the choreographer cannot be separated from the choreography. As such, it is necessary to discuss my personal dance background and training. As a dancer, I have an extensive background in Ballet and Contemporary dance styles; thus, these styles have a direct impact on my style of choreography and influence my style of physical theatre. Over the past six years at the University of Pretoria, I have acquired many different techniques on how to choreograph and how to use my daily circumstances to make choreography. Physical theatre allowed me to make important shifts in my dance style and not merely to focus on technique, but to connect my technique with storytelling. For instance, the upright alignment and pointed toes of Ballet, as well as the release technique in Contemporary dance are present in my style of choreography. The styles are intertwined and combined with the gestural language and storytelling of physical theatre to create on my own body and on those of others. My choreography and choreographic processes strongly relate to the work of Winearls (1990:7).

Winearls (1990:7) explains that her work seems deceptively simple, starting with an impulse that triggers off movement leading into a direction that creates design. She further states that her work develops variations that are emotionally, psychologically and physically involved. Winearls's description, as mentioned previously, perfectly matches that of my own choreography. Apart from drawing on emotion when creating work, my style and choreography

of physical theatre, as mentioned earlier, is influenced by my extensive Ballet and Contemporary dance training and techniques.

The three dancers who danced in the performances had different dance backgrounds, which made my Ballet and Contemporary dance background useful, as it allowed me to assist the dancers in the best way possible. The following section discusses the role the dancers played in this study.

1.8.2 Dancers:

I invited various professional dancers who are postgraduate students and ex-drama students from the University of Pretoria, who have specialised in physical theatre, to participate in my study. From the invited dancers[31], three dancers indicated that they were willing to participate. The dancers were not assessed for the study, nor asked to actively participate in the study other than executing the choreography with the various emotions as indicated by me.

Rehearsals took place from 11 April 2019. Certain aspects from Laban Movement Studies, Lessac Kinesensics, as well as aspects from Bloch's effector patterns[32] were used for the clear and safe embodiment of the emotions within the choreography. The dancers performed in front of a live audience in May 2019 for two consecutive days. The rehearsals, as well as the performance took place in the Lier Theatre at the University of Pretoria.

1.8.3 Audience:

The performance was viewed by an invited South African audience. I required a minimum of twenty audience members to make my data reliable and credible (Burmeister 2012:8). Audience members who were invited, consisted of members who have previously been exposed to physical theatre and dance[33]. Three groups were invited: 1. The lecturers of the

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[31] The dancers did not need experience with effector patterns presented in the Alba Emoting technique. I made use of the effector patterns along with other techniques the dancers were previously exposed to, to guide them through the process of embodying the three different emotions.

[32] Effector patterns is the term used for the specific facial, respiratory and bodily holding patterns of a specific primary emotions (Bloch, Orthous and Santibańez-H 1987:1).

[33] The audience list was provided by Matchbox Theatre, a professional dance-based physical theatre company owned by Bailey Snyman and Nichola Haskins. Matchbox Theatre provided a letter granting me permission to use their company to invite audience members. Once the members responded, I personally contacted them via email to provide them with the letter of consent. To ensure that there were at least twenty audience members, I personally sent out invitations, via email and social media, to the physical theatre practitioners I have contact with, as well as the Honours and Masters students of the University of Pretoria who majored in physical theatre.

University of Pretoria's Drama Department; 2. The audience members on Matchbox Theatre's invitation list; and 3. ex-students, current third year and post-graduate students and colleagues from the University of Pretoria, as well as invited family of the choreographer and cast[34]. These individuals all have different socio-cultural backgrounds and histories, thus represent the South African population.

There were two performances; the first performance included the invited audience members consisting of the first and second group as mentioned above. The second performance included the third group. This was done to determine whether audience members who have previously been exposed to dance-based physical theatre have a more accurate way of perceiving and distinguishing between the portrayed emotions, than the group who were not regular theatre or physical theatre goers.

The audience members were expected to download the mobile application on their personal cellular mobile devices using the URL provided to them before the performance commenced. The audience was provided with a wi-fi password to the wi-fi (wireless fidelity) router I provided, as the guest wi-fi of the University of Pretoria was not fast enough for the mobile application to record the data. The audience were instructed to watch the performance and distinguish between the emotions they perceived and recognised throughout the duration of the performance. Perception of the emotions of fear, anger and disgust were recorded by tapping the relevant tab on the mobile screen, correlating with one of the three specific emotions. As soon as the audience members tapped the tab on their mobile screen, the information automatically recorded, which provided me with the data spreadsheet needed to complete the study.

Now that the participants involved have been discussed and the various phases of this study have been briefly discussed, the chapters will be listed below with a description of their content.

1.9 Chapter Division

The purpose of the current chapter is to permit an understanding of what this study entails. This chapter introduced the research process and methods to form the basic framework of the

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[34] The first performance consisted of audience members who have previously been exposed to and have in-depth knowledge of physical theatre and dance. The second performance was for invited family members and friends of the choreographer and cast. Only the family members and friends who are not regular theatre goers were requested to use the mobile application.

study. This chapter also provided succinct scholarship on physical theatre as an art form and the relevant aspects as applicable to this study.

1.9.1 Chapter Two: Emotion

The purpose of this chapter is to investigate and discuss how emotion is shaped as a social human construct. Furthermore, this chapter dissects two primary scholarly discourses A) Emotional congruence: The basic emotive patterns; and B) Emotion as personally unique: "Emotion's Fingerprints". Chapter two also defines and discusses the three emotions presented in the performance, along with their specific physical manifestations and how the patterns are placed within the two scholarly discourses.

1.9.2 Chapter Three: Perception of Emotion

This chapter reviews scholarship on how humans and audience members perceive emotions based on facial expressions, body expressions, breathing patterns, and in the voice and sound. Furthermore, this chapter focuses on why audience members watch performances and what they look for when watching a performance. The perception of emotion is discussed in detail, preparing the way for the practical process which includes the choreographic process and the performance leading into my personal choreographic choices followed in chapter four.

1.9.3 Chapter Four: Choreography

This chapter discusses my choreographic process and includes my personal process as choreographer, delineating the intended emotions. Apart from reporting on the choreographic process, chapter four discusses the facilitation of the embodiment of the emotions, as well as the de-roling process. The elements that were incorporated in the facilitation process, namely: Laban Movement Studies (LMS); Lessac Kinesensics (LK); and Effector Patterns (EP), are also discussed. The elements as mentioned above are referred to as the 'three strategies' for embodying the emotions. From LMS the Effort Factors and Elements, as well as the Shape category were incorporated, and from LK the body NRG's (Neurological Regenerative Growth) were incorporated and integrated in the facilitation of the effector patterns for the three emotions and the de-roling process. The facilitation process covers both, humanly congruent and personally unique aspects of the embodiment of the three emotions.

1.9.4 Chapter Five: Data Collection and Interpretation

This chapter provides the time-line of both performances. The time-lines portray the exact time intervals of when the emotions were portrayed in the performances. The methodology, more specifically based on quantitative research, is discussed in this chapter leading into the data collection and the tool that was designed to collect the data for this study. The data collecting process, which includes the mobile application, as well as how the raw data are thoroughly analysed using basic statistics, is also provided in this chapter.

1.9.5 Chapter Six: Summation and conclusion

This is the final chapter of this study and confirms whether the study achieved its desired outcome and attempts to answer the research question appropriately. This includes: A) answering whether or not the audience could perceive [35] the emotions portrayed in the choreography; B) offering a critical reflection of the study and possible shortfalls; C) indicating further research and; D) reflecting whether it was methodologically soundly applied. In order to confirm the outcome, all the above chapters are necessary to gain a well-grounded understanding of the study.

The following chapter will define and discuss two primary conflicting discourses on emotion that are fundamental to this study. Dance-based physical theatre involves emotion to make it effective as a form of storytelling, which relates back to what was previously stated regarding physical impulses being intimately rooted with emotional experiences. Roether *et al*. (2009:1) mention that: "humans are able to express at least six emotional states (anger, happiness, sadness, fear, surprise and disgust with remarkable cross-cultural stability". Masuda *et al.* (2008:378) on the other hand, state that cultural differences play an important role when interpreting emotional expression. From these conflicting statements, it is implied that emotion can be viewed as either congruent or as personally unique. Before the two scholarly discourses can be discussed, there needs to be a clear understanding of emotion. Emotion as viewed by various scholars, along with the two conflicting discourses, is discussed in the chapter below.

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[35] This study did discuss the 'reception' of emotion with regard to the audience members. The aim of this study was purely to determine whether the three portrayed emotions in the performance could be perceived and distinguished by the audience.

CHAPTER TWO: HUMAN EMOTION

This chapter will define and discuss the various views on emotion. Two primary discourses will be discussed: 1. Emotional congruence[36] - emotion seen as common/general across various cultures; and 2. Emotion as personally unique to each individual according to their socio-cultural background. This study incorporated both discourses in order to understand how audience perceive emotion as well as how performers arrive at embodying and being to express emotion in performance. Before the two discourses are discussed, emotion is defined in the section below.

2. Emotion

All humans experience and express emotions. All humans recognise emotions in others. Yet, there is no conclusive theoretical description of emotions. Emotion can thus be described as an umbrella term, with various definitions attached to it. This section defines and discusses the concept of emotion and traces various theories that have contributed to the two categories that will be discussed later in this chapter. Emotion is a complex concept to understand and define, therefore it is necessary to discuss the various perceptions of emotion.

According to Cambria, Livingstone and Hussain (2012:144) there are more than 90 definitions of emotion. Emotions are said to originate in the brain, but manifest as physical feelings throughout the body (Jones 2019). Harris (2000:56) states that emotion is a "physical expression of how we perceive the status of something that we value". For instance, growing a certain sentimental value toward an object or loving another human being is bound to happen. When this object or loved one is placed in any situation, good or bad, there is an emotional reaction. This reaction is described by Goleman (1995:6)[37] as the distinctive readiness of an emotional expression/response to the situation. This readiness allows one to either protect or encourage the situation at hand. Every day, individuals are placed in situations where they are obliged to act, and without emotion, the readiness to express intent prohibits the necessary actions. According to Gomes (2017:37), emotions are the driving force for making decisions and play an important role in shaping individual preferences. Leavitt (1996:514) implies that emotions are used in daily discourse to "indicate experiences that involve both meaning and

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[36] Congruence is "an integration forming a coherent whole that creates a perfect harmony" (Beaumont 2009).
[37] It is acknowledged that this is a dated, yet seminal source still relevant due to the fact that emotion stems from early psychology.

feeling, both mind and body". Plutchik (2001), similar to Damasio (1999), states that emotions are an essential part of survival and make up a big part of an individual. Essentially, emotion is defined as the physical awareness of physical sensations that occur when expectations of a situation are satisfied or when expectations are threatened, leading to a reaction to the specific circumstances in order to satisfy one's need to survive (Damasio 1999:282).

It is implied that emotion is defined in many different ways. As previously stated in chapter one, there are two primary conflicting discourses on emotion that are fundamental to this study. Roether *et al.* (2009:1) mention that: "humans are able to express at least six emotional states (anger, happiness, sadness, fear, surprise and disgust) with remarkable cross-cultural stability". In contrast, Masuda *et al.* (2008:378) state that cultural differences play an important role when interpreting emotional expression. These conflicting discourses are also recognised by anthropology; dividing "between views of the emotions as primarily biological or primarily socio-cultural in nature" (Leavitt 1996:514). The two primary conflicting discourses pertinent to this study are therefore: 1) emotional congruence, as conceived of by Roether *et al.* and 2) personal uniqueness in emotion, as understood by Masuda *et al*.

In light of the above discussion, it is suggested that both scholarly discourses play an important role in portraying, expressing and perceiving emotion. Emotion as humanly congruent is firstly discussed as emotion formed in the brain. Emotion as personally unique is discussed secondly as emotion experienced and portrayed subjectively after the chemical response is formulated objectively in the brain and body. Rix (2001:206) suggests that physicality that comes with emotions is expressive and behavioural, making it personal, yet universal[38]. She confronts the question whether emotion is either a physiological or a cognitive event and reports that the two distinct views are maintained; one view posits that bodily reactions determine what and how humans feel, whilst the other asserts that bodily reactions are secondary indicators of our emotions[39]. The following section holds a discussion on the basic emotions that are expressed as humanly congruent.

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[38] The word universal refers to the general perception of emotion among humans from different socio-cultural backgrounds.
[39] There is, however, evidence that emotion can be a physiological reaction and then a cognitive event (Gross 2002: 281). There tends to be a rapid succession between "behavioural, experiential, and physiological" responses that influence how humans respond to "perceived challenges and opportunities" (Gross 2002:281).

2.1 Basic emotions as ur-emotions

According to Bond (2017:1), humans are "emotional bodies…primed and ready to express our needs through emotions"; she further suggests that all basic emotions are "hardwired in the brain at birth, yet each emerges as the brain develops". It is therefore implied that "basic emotions are primal, instinctive reactions" (Bond 2017:3).

Apart from the two scholarly discourses mentioned in the previous section, there are two categories into which emotions are divided; the first group being basic[40] emotions, and the second being compound emotions (Du *et al*. 2014:1). According to Frijda and Parrot (2011:406), the concept of basic emotions is prepackaged, multi-componential response patterns. Basic emotions include: happiness, surprise, anger, fear, disgust and sadness. Compound emotions are a combination of two of the basic emotions. An example of a compound emotion is appall, which is the "act of feeling disgust and anger with the emphasis being on disgust" (Du *et al*. 2014:1). In conjunction with compound emotions, Bond (2017:25) refers to mixed emotions, which position basic emotions as primary emotions and compound emotions as secondary emotions.

Bloch (2013) positions the concept of basic emotions, which Frijda and Parrot (2011:406) seek to replace with the notion of "ur-emotions". Diverting from compound emotions, the notion of ur-emotions refers to the state of action readiness and motive states that either relate or do not relate to the world and oneself. It is implied that ur-emotions, are universal and biologically based. According to Ekman and Cordaro (2011:365), ur-emotions belong to a single affective or psychological state. The basis that is formed by the related state allows humans to distinguish between the different emotions. Each emotion comprises a set of characteristics unique to its state; the characteristics found in ur-emotions, according to Ekman and Cordaro (2011:365) are:

1. "Distinctive universal signals";
2. "Distinctive physiology";
3. "Automatic appraisal";
4. "Distinctive universals in antecedent events";

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[40] Basic emotions are referred to by many theorists. These emotions cannot be "decomposed into smaller semantic labels" (Du *et al*. 2014:1). Basic emotions are also believed to be perceived cross-culturally/world-wide as discussed in Chapter Two.

5. "Presence in other primates";

6. "Capable of quick onset";

7. "Can be of brief duration";

8. "Unbidden occurrence";

9. "Distinctive thoughts, memories, and images";

10. "Distinctive subjective experience";

11. "Refractory period filters information available to what supports the emotion";

12. "Target of emotion unconstrained"; and

13. "The emotion can be enacted in either a constructive or destructive fashion".

It is implied that there are specific characteristics that make emotions congruent, therefore the notion of ur-emotions will be used throughout the course of this study. In the section to follow, emotion and what makes it congruent in humans is further discussed.

2.2 Emotional Congruence: The basic emotive patterns

According to Panksepp (1998:79), emotions are the manifestations of whole-brain and whole-body processes, expressed when the emotional brain circuit generates emotions for it to be interpreted in a certain way to influence behaviours[41]. Bloch and Lemignan (1992:31) define emotion as a complex and functional state triggered by an internal or external stimulus, which is then integrated with the central nervous[42] and neuroendocrine system[43]. Konijn (2000:57) argues that emotion is the potential offered by the surrounding environment or situation, combined with the potential of the individual, with regard to satisfying their interests. Simultaneously, emotion also involves specific organs, as well as subjective experience. This section will particularly discuss how emotion manifests in the brain and body without the influence of subjective experience.

MacLean (1988:[sp]) suggests that the brain can be divided into three sections, whilst being extensively interconnected, yet able to operate independently. The three sections are: 1. Protoreptilian forebrain; 2. Paleomammalian forebrain (Limbic System); and, 3.

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[41] Refer to previous footnote.
[42] The central nervous system (CNS), according to Dangond (2019), consists of the brain and the spinal cord and plays a role in the control of bodily functions. These bodily functions include: awareness, memory, movements, speech, thought and sensations.
[43] According to Andrea (2013:799), the neuroendocrine system "serves as an interface between the brain and many of the peripheral endocrine systems".

Neomammalian forebrain (MacLean 1988:[sp]). The Protoreptilian forebrain is associated with behavioural profiles, such as daily routines and behavioural patterns, such as communication. The Paleomammalian forebrain has three main subdivisions, which include: 1. feeling and expressive states necessary for self-preservation, such as the search for food, feeding and fighting; 2. feeling and expressive states necessary for pro-creation; and 3. behavioural triad that "characterises the evolutionary transition from reptiles to mammals" which includes: 3.1 nursing/maternal care; 3.2 "audiovocal communication for maintaining maternal-offspring contact"; and 3.3 "play behaviour" (MacLean 1988:127). The Neomammalian forebrain which is known as the brain "of reading, writing, and arithmetic" goes hand in hand with "the representation and discrimination of happenings in the external environment" (MacLean 1988:127). Based on MacLean's triune brain theory, it is therefore implied that there are humanly congruent structures in the brain to inform emotion and survival.

Loye (2002:133) justifies MacLean's theory by stating that "emotional responses are closely tied to reason through the functions of the prefrontal cortex". The development of moral sensibility and judgement is related to prefrontal functioning, which suggests that the connection between the "prefrontal cortex and other brain areas" allow humans to make deliberate choices instead of being caring (Loye 2002:133). Furthermore, these connections allow humans to "learn culturally sensitive signals" (Loye 2002:133). MacLean (1990:3) states that the subjective brain may give insight into the meaning of life, which implies that the brain in its entirety, informs humans how to survive and how to interact on a social level. Therefore, humans use the objective and subjective brain simultaneously. The objective brain refers to all three sections of the brain, as discussed above, to survive and function on a daily basis. The subjective brain refers to the influence of the socio-cultural background the individual is exposed to, which will inform how the individual uses the objective brain to function and express emotion.

Bond (2017:3) suggests that emotions "originate deep in the brain with the primary role of communicating survival information to the entire body", which is the involvement of the Paleomammalian forebrain. Emotions can bypass the thinking brain, which MacLean refers to as the Neomammalian forebrain, to deliver the "fastest life-sustaining action by connecting directly to our reflexes and immediately activating the whole body" (Bond 2017:3). Ur-emotions emerge when there is a "change in our state of being" (Bond 2017:3), which refers to the Protoreptilian forebrain.

Similar to Bond, James (1994:205) postulates that emotional and bodily changes are experienced at the same time and that emotional states precede cognition, implying that emotions are portrayed before rational thought takes place. According to Kamińska and Pelikant (2012:165), Plutchik's model of emotions describe his psycho-evolutionary theory consisting of ten main postulates:

• Emotions are applicable to all evolutionary levels, including animals and humans;

• Forms of expressions differ across species due to the evolutionary history of emotions;

• Emotions assist organisms with survival rate in threatening environmental situations;

• General patterns and common elements of emotion can be identified despite the "different forms of emotional expression in different species";

• There are a limited number of primary emotions;

• All the other emotions are combinations or compounds of primary emotions;

• Primary emotions have characteristics and properties that are inferred from various kinds of evidence;

• Primary emotions "can be conceptualised in terms of pairs of polar opposites";

• Emotions "vary in their degree of similarity to one another"; and

• Each emotion "can exist in varying degrees of intensity at different levels of arousal".

From the listed postulates, it is suggested that Plutchik's wheel of emotions consist of eight primary/ur-emotions that relate to biological adaptation of survival and they include: joy versus sadness; anger versus fear; trust versus disgust; and surprise versus anticipation (Kanmińska & Pelikant 2012:165). These primary emotions can be expressed in different intensities. According to Gomes[44] (2017:38), Plutchik (1980[45]) uses an analogy between emotions and a colour palette, suggesting that emotions have many different shades, some differences may be so subtle that they are unnoticeable.

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[44] This article, although placed in the area of economics, is valid and appropriate in addressing the integration of emotions and understanding the behaviour agents of certain emotions such as fear and disgust.
[45] It is acknowledged that this is a dated, but seminal source.

Theorists of emotion disagree vigorously on what emotions are, but they agree on the diagnostic features of emotion. These features involve the cause, constituents and effects of emotions (Barrett, Lewis & Haviland-Jones 2016:5). Barrett *et al*. (2016:5) state that there are five sequential episodes to forming emotions, which include:

• Firstly, the individual engaging in an evaluation of an event that unfolds (stimulus);

• Secondly, a sequence of physiological changes is likely to take place, such as increased heart rate;

• Thirdly, the distinctive expressions that may manifest, such as the face and body;

• Fourthly, a pleasant or unpleasant subjective experience may take place, such as feeling flushed or hot; and

• Fifthly and lastly, mental processes and behaviour dispositions are likely to change from their baselines.

In light of the above, it is suggested that emotion is set in motion when a threat or change presents itself, preventing the individual from satisfying their interest, or when there is hope of satisfying the individual's interest (Konijn 2000:57). After sensing or experiencing a generated emotion, the emotion is regulated by engaging with that emotion. Conscious or unconscious, the intervention is regulated by the chemicals secreted by the body (LeDoux 2012:656).

Huang (2002:167) suggests that emotion remains universal due to the folk models of emotions motivated by the bodily and physiological representations thereof. According to Damasio (2001:781), emotions result from evolution. It is therefore implied that there is something universal about emotions. The notion of universality is suggested by the easily recognisable and broad similarity of emotional responses across cultures, as well as species (Frijda & Parrot 2011:406). Emotion is triggered when the brain reacts to certain classes of objects and actions. In this way, various sets of emotionally accurate stimuli can arise. Emotional responses target endpoints, such as the limbs, face and voice for instance, in the body after being processed and generated by certain areas of the brain[46].

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[46] The areas in the brain where emotions are triggered are discussed below.

According to Daum, Markowitsch and Vanderkerckhove (2009:1), emotions are "embedded in neural structure" and who also emphasise that the body, brain and emotions are interwoven. There are many structures in the brain responsible for generating emotions and most of them are interconnected. However, there are some areas that contribute more rapidly to the regulation of emotion, namely the amygdala, thalamus, hypothalamus and the limbic system (Phan *et al*. 2004:258-259; Dalgleish 2004:582).

The view of van den Berg (2013) states that "emotions are generated neurobiologically"[47]. Similarly, Daum, Markowitsch and Vanderkerckhove (2009:1) express the ability of individuals to experience emotions and that identifying emotions in others is "dependent on the functional integrity of neural systems, with the limbic system and the amygdala."

The involvement of the somatic [48] and visceral [49] nervous system proves the physical manifestation of emotion. The visceral system consists of sympathetic and parasympathetic divisions[50], which are responsible for cardiac, as well as smooth muscle contractions and glandular secretion. The amygdala[51] and the hypothalamus[52] coordinate both systems, the visceral and somatic, which form part of the emotional motor system (Daum, Markowitsch & Vanderkerckhove 2009:2-5).

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[47] Neurobiology "focuses on the cells and tissues of the nervous system and how they can form structures and circuits for controlling the body" (What is Neurobiology? 2017).

[48] The somatic nervous system, the voluntary system, is located in the peripheral nervous system outside the brain in the spinal cord. This system carries nerve impulses to and from the central nervous system, where it then relays further information to the body as this system in responsible for voluntary movement (Somatic Nervous System: Definition, Function & Example 2017:[sp]).

[49] The visceral nervous system, also known as the involuntary system, also forms part of the peripheral nervous system (van den Berg 2013:440). The nerves within this system transport impulses from the central nervous system to the viscera and vice versa. This system also carries impulses from the cardiac muscle, glands and the constrained muscle (The Visceral Motor System [sa]:[sp]).

[50] The parasympathetic nervous system is in charge of how the body balances, as well as the body's rest and digest function. The sympathetic nervous system controls the body's responses to a perceived threat and is thus responsible for the 'fight or flight' response (Parasympathetic vs. Sympathetic Nervous System 2017).

[51] The amygdala forms part of the limbic system and is located between the left and right temporal lobes. The function of the amygdala is mainly to respond and process memories, emotions and responses to the environment. The amygdala gets information from all over the body through the senses of the body (Amygdala's Role in Emotion: Function, Overview 2017:[sp]). The amygdala then projects these to the hypothalamus or the cerebral cortex that then causes a variety of emotions. Initiating strong emotions related to survival and subjective feelings, the amygdala is also responsible for some emotional memory, as well as emotional learning (van den Berg 2013:426).

[52] The hypothalamus is a small organ between the thalamus and the amygdala and is an important nodal point concerning the function of stimulating emotions (Emotions: limbic system 2019). Mostly responsible for motivational behaviour, the hypothalamus, also controls the master glad that is in charge of the endocrine glands in the body (Hypothalamus [sa]:[sp]).

The limbic system is the area surrounding the brain stem, responsible for survival behaviours, such as fight and flight reactions and personal identity, as well as some memory functions (Rolls 1999:281; LeDoux 2012:655). The limbic system is the emotional centre, which means it is responsible for ur-emotions. Contemporary neuroscientists recognise these ur-emotions and explain them as a limited group of primary emotions, as mentioned previously (Frijda & Parrott 2011:406; LeDoux 2012:655). Traditionally, the limbic system is regarded as the seat of the emotions, whereas the neocortex[53] is regarded as the regulator of the executive function of the brain for preplanning and problem solving (Rajmohan & Mohandas 2007:132). According to Harmon-Jones and Allen (1998:1310), emotional and motivational processes are differentially involved in the left and right anterior regions of the cortex.

Emotion is therefore regulated when the external sensory stimuli receive information through seeing, hearing, feeling, smelling or tasting. The stimulus reaches the thalamus which then regulates motor functions. Keltner and Lerner (2001:146) state that "emotions trigger changes in cognition, physiology, and action", in order to assist the individual in responding to the "event that evoked the emotion". After the stimulus reaches the thalamus, signals are sent to the amygdala, which in turn, informs various systems to regulate emotion. The hypothalamus and the brainstem influence heart rate, blood pressure, and gut and bowel, as well as respiratory functions (Dalgleish 2004:583).

Not only do emotions send out signals vital to survival, making recognition and communication possible, but emotions also add colour to daily life and are essential for most developmental processes (Van Dyck *et al.* 2014:1). Ekman (2003:xiii) opines that the quality of human life is determined by emotion. He explains that emotions can cause real damage to mental and physical states of being, but can also save lives. He states that emotions can override other "fundamental motives that drive our lives: hunger, sex, and the will to survive" (Ekman 2003:xiii). Fear, anger, disgust, sadness and/or anguish have no priority among the emotions that people choose to experience. Since humans cannot live without these emotions, the issue, according to Ekman (2003:xiii), is "how to live better with them".

Emotions, such as sadness, have been understood in a certain way for over two thousand years (Barrett 2017:x). Over the course of time, new information has emerged, questioning

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[53] The neocortex forms part of the cerebral hemisphere and is responsible for higher order thinking, such as language and thought (The Brain's Cerebral Cortex (Neocortex) [sa]:[sp]).

previous beliefs on emotion. The time-honoured version of emotion is that humans are all born with distinct and recognisable emotions, making the congruence of human emotion an essentialist approach. When triggered, an emotion surfaces quickly and is automatically embodied and expressed in a human's face and body. Other characteristic expressions revealing human emotions include human voices, cries, shouts, body alignment and laughter (Barrett 2017:x).

Ecological challenges faced by our ancestors caused ur-emotions to evolve, but it has been proved that each ur-emotion corresponds to a "distinct and dedicated neurological circuit" (Burton 2016:[sp]). This provides a bio-physical underscore to this study. Bloch's effector patterns support the thesis and suggest that there are so-called 'universal emotions', implying an element of human congruency of emotion on a bio-physical scale. The neurological functions not only assist in decision making and comparing reward and punishment, but also prohibit irrational actions from taking place (Kappas 2013:1).

The classical view of emotion explains the human face as key to "assessing emotions objectively and accurately" as shared above (Barrett 2017:4). Human "facial expressions" display a particular pattern of movement, leading to the generalised conclusion that when one smiles one is happy and when one frowns one is angry (Barrett 2017:4). There are various discourses providing information about other 'primary 'ur-emotions, such as by Paul Ekman (2003:xiii); Robert Levenson and Wallace Friesen (2006:1208-1210); Neel Burton (2016:[sp]); Robert Plutchik and Henry Kellerman (1980:18); and Roxanne Rix (1993:139-145) to mention a few.

Keltner and Lerner (2001:146-147) give two assumptions[54] regarding emotions. The one assumption concerns emotions being associated with specific appraisals. Accordingly, these appraisals "reflect the core meaning of the event that elicits each emotion", resulting in individuals who "determine the influence of specific emotions on social judgement" (Lerner & Keltner 2001:147). This assumption states that social situations and events predetermine emotions and that each individual may possibly elicit similar emotions based on the circumstances.

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[54] The other assumption is discussed under the next heading.

Feelings, manifested in the body due to the nervous system and hormonal activity, are recognised as being subjectively experienced in all humans. According to Prinz (2005:9-10), there are many opposing views in psychology regarding the perception that emotions are feelings. Theorists and philosophers including Aristotle (Frede 1996:259); Descartes (Overton *et al*. 2008:4); Errol Bedford (Bedford 1957:282); George Pitcher (Pitcher 1965:326); Robert Solomon (Solomon 1993:10); Patricia Greenspan (Greenspan 2000:473), and Martha Nussbaum (Nussbaum 2001:[sp]; Ben-ze'ev 2004:451-452) all agree that feelings are not emotions. Feelings are explained as non-conceptual mental states, whereas emotions are explained as cognitive (Printz 2005:10).

Accordingly, Printz's (2005:10) view opposes that of Damasio[55] (2007:781) by suggesting that feelings can be viewed as being subjective, and that emotions are formed objectively by the same neurological system in the brain, irrespective of cultural conditioning. Feelings, according to Bond (2017:3), are "subjective interpretations of bodily sensations". This means that feelings can be associated not only with emotions, but with descriptors of "bodily comfort or discomfort, social conditions, and motivations" (Bond 2017:3). For example, a human may be sad or angry (ur-emotions), yet feel tired or sick (body discomfort); therefore, personal conditions or motivations may be described by feelings, whereas congruent biological functions are ur-emotions (Bond 2017:3).

In order to be human, people regulate their emotions. Kappas (2013:1) argues that emotions are self-regulating, drawing from social networks at different scales to provide empathetic feedback, as well as "direct action for others in co-evolving in social emotion cascades". As such, this leads to emotion as personally unique. Bond (2017:xi) suggests that human bodies "begin with the same basic biological components designed to create and express emotions; as we mature and interact with our surroundings, emotions become highly individualised and complex". The regulation of emotion is therefore viewed as an intra-individual process, which refers to being or occurring within the individual (Kappas 2013:1). The section below will therefore address how emotion can be viewed as being personally unique.

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[55] On page 25.

2.3 Emotion as personally unique: "Emotion's Fingerprints"

Human emotion and the process that informs it, are complex. Mauss, Wilhelm and Gross (2004:631) state that expressed emotions are the most distinct external portrayal of mental processes. With reference to this statement, Gross (2008:499), implies that emotional responses are "generated by appraisals", which involve changes in "experiential, behavioural, and physiological response" systems. Bond (2017:xi) states that "each society and culture establishes universally understood boundaries for emotions, including their usefulness and appropriateness", emphasising that responses are subjective and dependent on cultural circumstances. According to Ahmed ([Sa]:1), emotion forms the "surfaces of individual and collective bodies". This indicates that external stimuli affecting the body inform how the body is shaped. Konijn (2000:57) defines emotion as the potential offered by the surrounding environment or situation, combined with individual potential to satisfy personal interests. Bloch and Lemignan (1992:31) refer to emotion as being a complex and functional state triggered by internal and/or external stimuli.

The theorists depart from the belief that the context of being human informs emotional experience. Each individual will have a different reaction to the same context uniquely individualising and personalising emotion. The term personal uniqueness derives from the Principles of Bartenieff Fundamentals, and holds the definition that "movement patterns, like life, are a uniquely personal journey" (Hackney 2002:53). It is therefore implied that the movement patterns associated with portraying emotions are unique to each individual. From this paradigm, emotion is defined as sensed feelings that occur when expectations of a situation are satisfied or threatened. This leads to a reaction to specific circumstances in order to satisfy one's need to exist and survive.

This relates to Bloch's (2013:698) views, who maintains firstly, that internal subjective emotional states differ from person to person or from one moment to another in the same person, and secondly, that emotional arousal of the individual will be dependent on the personal history, socio-cultural background and the current circumstances of the individual. Plutchik (2001) explains that several emotions can be experienced at the same time resulting in emotional experiences being highly personal and often confusing.

Although there are many other theories on the definition of emotion, there seems to be general agreement on its connective human value, allowing these theories to empathise with one another. The way humans choose to communicate and present emotions forms part of their identity, stemming from their socio-cultural backgrounds. Huang (2002:167) avers that emotional language varies cross-culturally. Sekimoto (2012:226) argues that identity can be deconstructed by moving beyond "the symbolic construction of social categories, and instead focus on how a perceptual and embodied subject is constituted through communication". Sekimoto holds that cultural identity is constructed through embodied communication, which includes emotive, personal and social experiences. This argument potentially counteracts the view of scholars who conclude that emotion is universally recognised.

Barrett (2017:12), posits that emotions are archetypal "fingerprints", stemming from the fact that no-one can claim with certainty that "each emotion has a diagnostic facial expression". Each emotion is different and each human experiences an emotion in their own way. How an emotion is expressed is interconnected with the unique signature of each human's socio-cultural background. Frijda and Parrot (2011:406), similar to Barrett (2017:12), explain that cultural differences eliminate response patterns. This is due to emotional states that are often accompanied by particular facial expressions and the duration of the expressions do not match reported emotional durations. Barrett (2017:18) further states that emotions cannot be localised to a specific region in the brain, as there are multiple circuits that contribute to various emotions. Barrett (2017:18) further suggests that the emotions of twins cannot be located in the same area of the brain. Like Sekimoto (2012:226), Barrett questions the view that there are universally expressed and performed emotions.

According to Keltner and Lerner (2001:146), emotion often continues beyond the situation. This assumption supports the discourse that emotions are uniquely experienced and expressed by each individual. The changes triggered in each individual will lead to different actions and affect each individual on a personal level that cannot be measured by the general public. According to Ekman (2003:21), the display or expression of emotion differs from one culture to another; suggesting that there are certain rules on displaying and expressing emotion which are socially learnt and culturally different. Similar to Ekman (2003:21), Van der Westhuizen (2017:205) states that "emotion is culturally constructed from everyday meaning-making that is situated, involves practical activity and is infused with sedimented social and personal history". Therefore, culture is implied to be a system of beliefs, values and practices that shape the

individual brain and as a result also the mind (Soto *et al*. 2016:42). These values and beliefs allow individuals collectively to subscribe to social norms that lead to adaptive practices in the cultural context (Soto *et al*. 2016:42).

In conjunction with the above, Mesquita and Karasawa (2004:161) state that emotional experiences greatly vary across cultures; it is therefore necessary to understand the variations presented in these cultural models. Matsumoto and Hwang (2012:92) assert that "cultures regulate biological emotions" to calibrate what individuals "become emotional about and adapt the reactions that occur when elicited". Language, memories, and abstract thoughts are unique cognitive abilities that allow cultures "to elaborate on human emotions by facilitating the construction of culturally based emotions and their associated meanings" (Matsumoto & Hwang 2012:92). Marsh, Elfenbein and Ambady (2003:373) confirm that basic commonalities in emotion exist; however, they explain that local variations in these emotional expressions can be expected across cultures. Marsh *et al*. (2003:373) further explain that "emotional expressions may function as a universal language, but with regional accents". Ekman (2003:79) states that some expressions, such as physical gestures and verbal language are culture-specific, but suggests that vocal and facial expressions are universal.

Owing to the personally unique context of emotion each human experiences, it is necessary to discuss the three emotions that were present in the performance choreographed for this study. These three emotions are said to be part of ur-emotions that each human being experiences.

2.4 The three emotions presented in the performance

The three emotions presented in the performance were anger, fear and disgust. These emotions were chosen as I experience all three of these emotions on a daily basis. I specifically chose these three emotions due to the way I perceive them in my personal socio-cultural paradigm. In my upbringing, as an Afrikaans South African female, there was an emphasis placed on the inappropriateness of allowing these three emotions to surface in my behaviour in a social setting. This is referred to as 'ordentlikheid' and the need to fit into the paradigm of Afrikaans 'idealised womanhood'[56].

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[56] According to Brink (2019:[sp]), idealised womanhood a means by which male-dominated societies control women by giving them a "well-defined but circumscribed position within society, to which some status, honour and respectability are attached".

According to Van der Westhuizen (2017:8), ordentlikheid is an Afrikaans word used "to reference ethnocultural features associated with a certain bodily comportment". This word is translated into words ranging from "respectability, presentability and good manners, to politeness and Calvinist humility" (Van der Westhuizen 2017:8). This author (2017:8) further suggests that the ideal Afrikaans, female-bodied subject "represents the most revered femininity of normative ordentlikheid" and that we are "produced, policed and disciplined, in iterations that activate failures, disruptions and refusals". Allowing these emotions to surface in my behaviour was discouraged, since they were seen as 'unladylike', which often led to my suppressing of the emotions resulting in 'outbursts'[57] and anxiety.

The three above-mentioned emotions are often acknowledged as 'negative emotions', but it is believed that they have an important purpose. Bond (2017:4) suggests that so-called negative emotions are survival orientated and meant for "immediate and short-term application to life-threatening situations". Negative emotions, according to Rozin *et al*. (2005:399), include: anger, fear, sadness, disgust and in some cases contempt. So-called negative emotions allow individuals to manage daily challenges and situations (Kuppens & Realo 2008:66). Ekman and Cordaro (2011:365), on the other hand, reject the notion that emotions, such as anger and disgust are inherently destructive or negative. Instead, Ekman and Coradaro (2011:365), suggest that any emotion "can be enacted in a constructive or deconstructive fashion" depending on the situation or context that led to further collaboration.

According to Chiesa *et al*. (2013:84-85), there are two types of emotion regulation strategies that should be distinguished and they are: 1. antecedent-focused emotion regulation strategy, which is the manipulation of the input to the emotion-generative system; and 2. response-focused emotion regulation strategy, which manipulates the output of the emotion-generative system. The response-focused emotion regulation strategy occurs when an individual consciously suppresses emotional expression when a particular emotion(s) arises. Under certain circumstances, this strategy is useful, but its repeated use could lead to negative consequences which include a decreased experience of positive emotions, as well as a higher

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[57] These 'outbursts' is a feeling of having a closed throat and not getting enough oxygen, which lead to shallow breathing. The shallow breathing would leave me feeling claustrophobic and as a result, I would cry. I would feel confused, because I was not feeling sad. Mass, Wilhelm and Gross (2004:631) state that anxiety "has a highly salient bodily component" which includes a racing heart, sweaty palms and shortness of breath.

possibility of depression. It is concluded that the disruption of certain emotions does not necessarily mimic one's behaviour when facing those emotions (Chiesa *et al*. 2013:84).

Antecedent-focused emotion regulation strategy on the other hand, involves actively interpreting and expressing emotional stimuli in a way that modify the impact an emotion has on the individuals. The benefit of this strategy is that it is adaptive for "down-regulating intense negative emotions" (Chiesa *et al*. 2013:85). By using this strategy, the individual starts being mindful of emotions, which entails "a systematic retraining of awareness and non-reactivity, leading to defusion from whatever is experienced, and allowing the individual to more consciously choose those thoughts, emotions and sensations they will identify with rather than habitually reacting to them" (Chambers *et al*. 2009:569). The above strategy, which is antecedent-focused, closely speaks to the effector patterns used by the dancers in this study to embody the three emotions. Embodying the emotions mindfully and physiologically allows the performers to focus on the purpose, in the present moment and not to judge these emotions (Kabat-Zinn 1994:4).

For a better understanding of each of the three emotions that were portrayed in this study, the two scholarly discourses of 1. emotional congruence, and 2. emotions as personally unique, will be applied to the three emotions specifically. As such, this will form a discussion on their effector patterns, as well as their personal uniqueness in various cultures.

2.5 The three emotions portrayed in the performance:

March *et al*. (2003:373) state that facial expressions from the basic emotions: anger, fear, disgust, happiness, sadness, and surprise can be accurately recognised across cultural boundaries. It is therefore implied that humanly congruent schemas for the appearance of basic emotions exist.

During the rehearsal process the effector patterns that are scientifically devised for generating emotional states were incorporated (Rix 2001:205). It is important to note that the rehearsal process was merely based on the technique's use of 'effector patterns', which are aspects of emotion that can be reproduced at will, through prototypes of change in respiration, body attitude and facial expression (Rix 2001:209). According to Ginslov (2004:4), the effector patterns are 'universally recognisable and understood'.

There is also a seventh pattern that forms part of the effector patterns termed 'step-out', which is to get the body back to its neutral[58] state through optimal alignment[59], slow, deep breathing and the release of facial tension (Rix 2001:209). Lessac Kinesensics (LK) was also incorporated as it "can be used to engage with the inner and outer bodies of character" and "extends the limits of what the body might be able to do" (Lončarić 2017:44)[60]. Laban Movement Analysis (LMA) assisted with describing the intentional content and expressiveness of the human body (Rett & Dias 2007:2)[61]. Further LMA "classifies movement components into four categories: Body, Effort, Shape and Space" (Tsachor & Shafir 2017:3). LMA is particularly useful for "observing and noting movement" phrases in daily situations due to the continuously changing components from the four categories (Tsachor & Shafir 2017:3). LMA is relatively easy for people to understand as it makes use of descriptive language that identifies "qualitative and quantitative aspects of movement with words, such as light, strong, sudden, forward, sink, or retreat" (Tsachor & Shafir 2017:3).

Furthermore, LMA has been used to describe "movements associated with diverse topics, from personality to emotional states" (Tsachor & Shafir 2017:3). Therefore, LMA is an ideal tool to use in describing the effector patterns that are associated with the different emotions. Changes in movement components can now be facilitated through "conscious movement responses" by exposing the "slight condensing or binding in response to a situation" (Tsachor & Shafir 2017:6). For instance, fear, anger and disgust have very slight bodily shifts that differentiate the emotion's body expression; therefore, LMA was used to make it easier to facilitate the recognition of the subtle emotional shifts within the effector patterns.

Disgust is not included in the effector patterns based on the work of Susana Bloch; therefore, it was necessary to devise effector patterns to portray disgust through incorporating the above-mentioned acting techniques. Owing to the effector patterns that already exist for fear and anger, LK and LMA were incorporated into the effector patterns to make it easier to embody in

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[58] Discussed in Chapter four.
[59] Optimal alignment considers the interconnection of the shape of the spine, the habitual head-neck relationship, the way the arms hang from the shoulders, the way the pelvis is used, the balance in the hips, the tension in the knees and the placing of the feet (Shewell 2009:105). The word alignment, according to Shewell (2009:106), describes the relationship of one body part in relation to another body part. Optimal alignment links with the notion of 'Holistic Integration' from the embodied principles, explaining that everything in the body is connected, thus nothing can function separately (Steyn 2015:7).
[60] Emotive breathing, along with LK's relaxer-energiser/pain-relievers, as well as de-rolling, are discussed in Chapter four.
[61] The rehearsal process and embodiment of the emotions will be discussed further in chapter four.

a performance. According to Ekman and Cordaro (2011:365), anger, fear and disgust are "universal" due to the similar descriptions of these emotions.

Anger is "the response to inference with our pursuit of a goal we care about. Anger can also be triggered by someone attempting to harm us (physically or psychologically) or someone we care about. In addition to removing the obstacle or stopping the harm, anger often involves the wish to hurt the target" (Ekman & Corado 2011:365). Fear is "the response to the threat of harm, physical or psychological. Fear activates impulses to freeze or flee. Often fear triggers anger" (Ekman & Corado 2011:365); and Disgust is "repulsion by the sight, smell, or taste of something; disgust may also be provoked by people whose actions are revolting or by ideas that are offensive" (Ekman & Corado 2011:365).

It is, however, important to note that the exact manifestations of the effector patterns are personally unique due to the way an individual's face and body is shaped. A human's ur-emotions are "hardwired in the brain at birth", yet each emotion emerges and develops over time (Bond 2017:1). Even though an individual's social background has an effect on how emotions are portrayed and perceived, the embodiment of effector patterns is suggested to be a refined and mechanical process that, with enough practice, can assist humans in portraying ur-emotions congruently (Bond 2017:216). Having discussed all three emotions briefly, a more in-depth discussion of each of the three emotions will take place in the sections to follow, starting with anger.

2.5.1 Anger

Ginslov (2004:3) suggests that anger is necessary for protecting our loved ones, for procreation and the desire to "get ahead". Anger is implied to be a response to either an internal or external event perceived as a threat, violation or injustice (Thomas 2003:351). According to Jha, Prakash and Sagar (2018:195), anger is an emotional response that is generated instantaneously and can be controlled by the expresser. Harmon-Jones and Allen (1998:1311) assert that anger evokes a behavioural tendency to attack or defend and is an emotional response to "the blocking of obtaining an expected goal". Anger follows an event in which an obstacle is presented/created and it may lead to increased approach motivation during a relearning task, suggesting that anger may be an approach-related emotion (Harmon-Jones & Allen 1998:1311).

According to Ekman (2003:127), frustration with anything, even inanimate objects or failure of own memory or ability can generate anger. It is implied that anger positively correlates with assertive and competitive traits. According to Tiedens (2001:87), anger could be a successful social strategy due to the intimidating impression this emotion creates. The expresser of anger usually comes across as strong and persuades other humans to comply with them (Tiedens 2001:87). Anger is suggested to be a powerful emotion. Owing to the specific and congruent effector patterns that will be discussed below, it is vital to understand where anger originates in the brain and whether anger associates in the same area across the human species.

According to Harmon-Jones and Allen (1998:1311), anger is associated with "increased left-anterior cortical activity". Greater frontal brain activity is associated with an increased approach motivation, even though anger is regarded as a negative emotion (Harmon-Jones 2007:154). Pichon, de Gelder and Grézes (2008:199) state that whole body expressions of anger involve the amygdala and the lateral orbitofrontal cortex, which are the areas in the brain that play a role in the effective evaluation of stimuli. Jha, Prakash and Sagar (2018:194), as well as Ekman (2003:131 & 145) state that anger is an important, yet potentially destructive and dangerous emotion that negatively affects health in the long-term, leading to illness, such as heart disease. Anger affects the brain instantly "increasing the blood flow to the skin, and thus changing the skin temperature" and results in a high pulse rate (Jha, Prakash & Sagar 2018:195).

When experiencing anger "arterial tension and stress hormones, such as adrenaline, testosterone, and cortisol increase", leading to the aforementioned increased "heart rate, breathing and skin temperature, as well as a variation in skin conductivity" (Jha, Prakash & Sagar 2018:196). According to Gu and Li (2015:6383), emotional and physical changes are associated with chest and abdominal respiration patterns. Respiration patterns are therefore used to analyse the emotional state of humans, which leads to the breathing patterns involved in embodying anger. Ekman (2003:152) similarly states that "angry sensations include feelings of pressure, tension, and heat". The previously indicated increase of heart rate and respiration, results in the rise of blood pressure causing the face to redden (Ekman 2003:152).

2.5.1.1 Breathing Patterns for Anger

The breathing patterns typical to anger, as described by Bloch (2015:1556), are ragged like the "teeth of a saw." According to Bloch and Lemignan (1992:35) the breathing patterns for the basic emotion of anger are sharp in shape, increasing considerably in both amplitude and

frequency, but has no respiratory pulses. Similar to Bloch and Lemignan, Gu and Li (2015:6390) explain the breathing pattern for anger as breathing sharply through the nose. Furthermore, Gu and Li (2015:6395) state that anger leads to an irregular breathing pattern, which in turn, results in the ribcage expanding more than the abdomen. However, the specific breathing pattern for anger tends to be different for each individual, depending on the different degrees of anger (Gu & Li 2015:6395). According to de Melo, Kenny and Gratch (2010:227), the breathing pattern associated with anger involves fast and deep breathing.

2.5.1.2 Body Attitude and Expression for Anger

According to Pichon, de Gelder and Grézes (2008:200), body expressions for anger are of primary importance in "regulating social interactions and in negotiating aggressive confrontations" in other individuals. The bodily orientation is tense in general and is abrupt, as well as fast in movement quality. The directional attitude of this emotion is forward, as if to threaten or attack and the head orientation is forward low (Bloch & Lemignan 1992:36). Castellano, Kessous and Caridakis (2008:95) mention a common gesture that is associated with anger, that of violently defending the hands. It is implied that there is a lot of tension in angry gestures.

2.5.1.3 Facial Traits and Expression for Anger

The facial traits include semi-closed/narrowed eyes, as the eyelids are both tensed, the brow wrinkles vertically and the eyebrows frown. The gaze is focused and the mouth is clenched with tight lips (Bloch & Lemignan 1992:37). Marsh *et al*. (2005:75) state that anger facial traits include heavy, low eyebrows with narrow eyes and a neutral face. According to Ekman (2003:151-152), the facial traits for anger involve the following:

• Pulling the eyebrows down together, ensuring that the inner corners go down toward the nose;

• While holding the eyebrows down, narrow the eyes so that the upper eyelids push against the lower eyebrow while staring hard; and

• Press the lips tightly against each other;

According to Ekman (2003:128), anger is rarely felt alone and it usually accompanied or followed by fear. Fear and the effector patterns associated with this emotion are discussed in the section to follow.

2.5.2 Fear

Ekman (2003:171-172) asserts that when individuals are fearful, blood spreads to the larger muscles in the body in preparation for the individual to flee. It does, however, not mean the individual will flee, but that evolution has prepared humans for what has been the most adaptive behaviour to ensure survival. If an individual were to freeze, it would mean the individual assumes the danger will not notice (Ekman 2003:172). Therefore, it is implied that feeling anxious and panicked comes with the emotion of fear, which is necessary for humans to flee or fight danger.

Fighting or fleeing danger is done with little or no conscious control (Ginslov 2004:3). According to cognitive theorists, fear involves the perception of being in danger (Prinz 2005:10). Bloch (2015:1523) positions two "possible visible manifestations of fear" 1) the active preparation for fighting; and 2) the passive reaction of the body being totally immobile, also known as 'freezing'. LeDoux (2002:728) suggests that when humans are presented with a dangerous situation or defensive behaviour that is elicited by another subject, the autonomic nervous system and neuroendocrine system are activated, which are involuntary systems humans have no control over. The activation of these involuntary systems ensure survival. The autonomic nervous activation results in a change in heart rate and blood pressure, and the neuroendocrine system release hormones from the adrenal glands.

According to LeDoux (2002:228; 2004:809), the amygdala[62] as well as the temporal lobe are the regions in the brain responsible for fear. LeDoux (2004:809) explains that the information regarding the perceived stimuli is "transmitted through the sensory pathways to the thalamus and cortex, and from each of these brain regions to the amygdala". Once the emotion is perceived in the brain, the precautionary actions are spread through the limbs in order to act as appropriately as possible. The fear processing from these brain regions is different as the thalamus provides the amygdala with a "rapid but imprecise representation of the sensory input", whereas the cortex conveys a more complex representation (LeDoux 2004:809-810).

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[62] The amygdala is located deep inside the temporal lobe and consists of a large group of cells organised in the nuclei (LeDoux 2004:810).

Having explained the emotion of fear, it is vital to gain an understanding of the effector patterns that contribute to making fear a humanly congruent emotion.

2.5.2.1 Breathing Patterns for Fear

The breathing patterns include superimposed saccades of respiratory cycles, shaped in the inspiratory 'plateau'. The respiratory amplitude is big in volume and continues to increase along with highly increased and varied frequencies (Bloch & Lemignan 1992:35). According to Ekman (2003:178), the breathing may become deeper and more rapid at times. Van Diest *et al*. (2009:212) state that the mechanics of respiration may become slower and more variable when an individual is fearful. De Melo, Kenny and Gratch (2010:227), similar to the theorists discussed previously in this section, state that fast, deep breathing is associated with the emotion of fear. However, depending on the context in which the individual is placed, there is no even respiratory pattern. For instance, when freezing and trying to be quiet, the individual may slow breath down. Breathing may also appear as though there are brief inhalations, almost as if the breathing stops at times, followed by passive incomplete exhalations (Bloch 2015:1530).

2.5.2.2 Body Attitude and Expression for Fear

The physiological activity includes increased heart rate and muscular tension (Bloch 2015:1530). The body expression of fear, like anger, is tense in general muscle tone and abrupt in movement quality. The directional attitude of fear is backward as if one wants to escape; the head orientation is retracted from the body's axis (Bloch & Lemignan 1992:36). The eyes are, however, constantly observing, which means the eyes follow the head and the direction in which the body moves. Ekman (2003:178) states that the hands may feel colder and a cold sweat may break out on the skin. The muscles may tremble and shake while the body moves back in spatial orientation (Ekman 2003:178).

2.5.2.3 Facial Traits and Expression for Fear

The facial traits of fear include having wide open eyes with the upper eyelids raised. The brow has horizontal wrinkles and the eyebrows are raised and tensed. The gaze is indirect and searching, aware of everything in the surrounding environment, while the mouth is open and vertically tensed (Bloch & Lemignan 1992:37). Marsh *et al*. (2005:75) state that fearful facial expressions include thin or arched eyebrows with widely opened eyes and a flattened brow

ridge. According to Ekman (2003:177 & 178), the facial traits involved when embodying fear are as follows:

• Raising the upper eyelids as high as possible, while slightly tensing the lower lids;

• The jaw drops open, stretching the lips horizontally; and

• The eyes stare straight ahead.

The explanation by Ekman (2003:177-178) is slightly different from that of Bloch and Lemignan (1992:73), contributing to the scholarly discourse that describes emotions as fingerprints and as personally unique to each individual based on their cultural paradigms.

Unlike anger and fear, disgust is not regarded as a 'primary' emotion by theorists, such as Bloch and Lemignan (1992). The effector patterns for disgust are discussed based on relevant scholarship.

2.5.3 Disgust

Disgust is viewed as an emotion that shapes moral judgement (Schnall *et al*. 2008:1096), which makes it an important emotion in daily life situations. There are few theorists who view disgust as a primary emotion. The following theorists agree that disgust is indeed a primary emotion: Panksepp (2007:1819); Plutchik (2001:348); Ekman and Cordaro (2011:165); Christie and Frieman (2004:143-144); and Lee and Ellsworth (2013:2), to mention a few. According to Rozin and Fallon (1987:23), disgust has been recognised "as a basic emotion since Darwin"[63]. Curtis and Biran (2001:18) state that disgust is not only a powerful emotion, but an emotion felt by all humankind. Rozin and Fallon (1987:23) argue that disgust, like the other basic emotions, has "a characteristic facial expression, an appropriate action (distancing of the self from an offensive objet), a distinctive physiological manifestation (nausea), and a characteristic feeling state (revulsion)". Disgust is therefore described as a strong negative feeling of disapproval or aversion due to the "repulsion by the sight, smell, or taste of something" (Ekman & Cordaro 2011:365).

Lee and Ellsworth (2013:3) assert that there are two kinds of disgust: 1. Physical disgust, and 2. Moral disgust. Physical disgust is treated as a true emotion having expressive, physiological,

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[63] Charles Robert Darwin (1809-1882) studied and expanded the theory of evolution (van Wyhe 2002).

and functional features. Moral disgust on the other hand is the kind of disgust seen as an extension of physical disgust through cultural development. It is thus implied that physical disgust is where individuals "kill germs and avoid contamination"; whereas in moral disgust individuals "punish, avoid, and ostracise social parasites" (Lee & Ellsworth 2013:4).

Other theorists, such as Schnall *et al*. (2008), state that disgust evolved from only a food-related repulsion to an emotion used to detect social rejection. It is suggested that disgust is used across many cultures due to similar verbal and facial expressions used to reject physically disgusting stimuli, as well as "certain kinds of socially inappropriate people and behaviours, some that involve the inappropriate use of the body" (Schnall *et al*. 2008). Ekman and Cordaro (2011:365), similar to Schnall *et al*. (2008), state that disgust is provoked "by people whose actions are revolting or by ideas that are offensive". It is implied from the discussion above, that disgust is humanly congruent in many dimensions. Disgust, according to Lane *et al*. (1997:926), is associated with increased activity in the thalamus and medial prefrontal cortex, as well as the activation of anterior and posterior structures in the brain.

Schäfer *et al*. (2009:264) state that disgust results in the activation in the calcarine fissure, as well as the activation of the "amygdala (left and right), the orbifrontal cortex (right), the Dorsalateral prefrontal cortex (left), left medial prefrontal, left inferior parietal cortex and the insula (both hemispheres)". According to Shapira *et al*. (2003:2), disgust in Obsessive Compulsive[64] individuals is "strongly associated in the insula, the parahippocampal region, the inferior frontal gyrus, the caudate nucleus in the basal ganglia, and the primary sensory cortex. Disgust also prompts "increased processing in the visual cortex" (Shapira *et al*. 2003:2), as well as the basal ganglia and insula, as suggested by Shapira *et al*. (2003:2) and Rozin *et al*. (2005:398). Having discussed the neurological pathways of disgust in the brain and how this emotion is in fact considered as part of ur-emotions, the following section will discuss the effector patterns associated with disgust. According to Valstar and Pantic (2010:66), disgust along with happiness and surprise are emotions that are easier to induce due to ethical concerns.

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[64] According to Phillips *et al*. (1998:374), disgust is an emotion that underlies various psychiatric disorders such as Obsessive Compulsive Disorder, phobias, depression and eating disorders, to mention a few.

2.5.3.1 Breathing Patterns for Disgust

The breathing pattern associated with disgust is shallow and almost stops (Haidt 1993). According to de Melo, Kenny and Gratch (2010:227), disgust correlates with inspiration pauses, in order to exclude inhalation noxious gases and/or to suppress nausea. The breathing pattern for disgust includes post-inspiration pauses and breathing suspension (de Melo, Kenny & Gratch 2010:227).

2.5.3.2 Body Attitude and Expression for Disgust

The body is parasympathetic[65] resulting in sensory avoidance and often in goosebumps[66] appearing. The head turns/jerks away, while shaking slightly, from the irritant and the body goes into an upward retreat with a slight narrowing of the shoulders (Curtis & Biran 2001:18). Gunes and Piccardi (2007:4) state that the body backs away from the stimulus with the left or right hand touching the neck.

2.5.3.3 Facial Traits and Expression for Disgust

The cheeks are raised, the upper lip curls, while the corners of the lip are drawn down and back. The eyes narrow and rapid blinking takes place. The eyebrows lower inward and the nose draws up and wrinkles slightly (Curtis & Biran 2001:18). According to Gunes and Piccardi (2007:4), the facial expressions involved in the emotion of disgust include a raised upper lip with the lower lip that is also raised and pushed up toward the upper lip, or the lower lip is lowered. The nose is wrinkled, cheeks are raised, the brows are lowered, and the tongue is out (Gunes & Piccardi 2007:4). Haidt *et al*. (1997:111) also suggest that disgust involves a wrinkled nose, a reaction of the upper lip and sometimes includes a gape. In light of the above-mentioned effector patterns, it is implied that each of the emotions can be embodied using specific breathing patterns and bodily expressions, as well as facial expressions of the specific emotion.

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[65] The parasympathetic nervous system forms part of the autonomic nervous system and is also referred to as the rest and digest system. The parasympathetic system conserves energy as it slows the heart rate and increases intestinal activity (McCorry 2007:3-4).

[66] Goosebumps are termed "emotional piloerection" and occurs when an individual relates to a peak state of being (Wassiliwizky, Jacobsen, Heinrich, Schneiderbauer & Menninghaus 2017:[sp]). Furthermore, this state is also associated with physiological arousal that indicates a climax in emotional arousal (Wassiliwizky *et al*. 2017:[sp]).

As stated above, human congruency of emotion is perceived as an essential part of human existence and survival. To be emotionally congruent is to become aware of human emotion at the moment it is experienced by, in and through the body and to be able to recognise the specific emotion felt when an emotional event occurs (Cambria, Livingstone & Hussain 2012:144-145). Feelings, however, manifest multiple shifts in the body due to the body's response to an emotion. Evidence has been used to argue that emotion is formed objectively by the same neurological system in the brain, irrespective of cultural conditioning (Damasio 1999:282). By contrast, studies emanating from 'cultural neuroscience'[67] support the view that all human emotion is unique in specific contexts.

While investigating the different scholarly discourses relevant to this study, my focus will be on the concept of humanly congruent patterns of expression, specifically on anger, fear and disgust. Wallace Friesen (1971:124), Izard and Buechler (1980:168), Paul Ekman (2016:32), and Robert Plutchik (Basic Emotions 2018:[sp]), consider all three as primary emotions. These views all tend towards accepting that emotions are static and universal. I now turn to the conflicting view on how personal uniqueness and socio-cultural paradigms feed into human experience and reactions in specific contexts.

2.6 Emotional Fingerprints associated with the three emotions portrayed in the performance

The section to follow holds a discussion on the cultural accents that make the three emotions that were portrayed in the performance unique in individuals.

2.6.1 Anger

According to Kövecses (2000:167), the conceptualisation of anger across cultures is considerably different, despite the similarities in the body and physiological functioning. It is suggested that: 1. cultures develop their own distinctive concepts that dominate explanations used to interpret experiences; and 2. subtle differences in physiology and the conceptualisation thereof may lead to different understandings and interpretations of this emotion (Kövecses 2000:167).

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[67] According to Kitayama and Park (2010:111), "cultural neuroscience is an interdisciplinary field of research that investigates interrelations among culture, mind and the brain".

2.6.2 Fear

Miller (2000:441) implies that cultural training and influences create an ambivalence in the body due to the developed body-mind split. The mind thus controls the body by downplaying certain emotions. The ambivalence towards bodies, according to Miller (2000:442), often becomes fear. Miller (2000:442) further explains that fear can be divided into different groups:

1. losing control over emotional content and management of emotions;
2. not knowing what may happen next; and
3. losing face, which includes a wounded self-image.

All three categories are displayed and interpreted differently across cultures.

2.6.3 Disgust

Disgust, according to Haidt *et al*. (1997:111), varies in accordance with culture. Rozin and Haidt (2013:367) state that disgust has evolved biologically and culturally to adapt in response to distaste.

It is therefore implied that emotion connects humans by allowing individuals to empathise with one another. The three emotions discussed in this study are used to guide human judgements and to indicate which boundaries individuals should or should not cross (Schnall *et al*. 2008). There are different effector patterns for each of the emotions and it is vital for performers to know and make use of them to avoid emotional fatigue. It is also implied that cultural and personal influences may cause emotions to be embodied differently in each individual, making it difficult for humans to perceive emotions accurately. It is acknowledged that emotion not only enhances the quality of the performance, but potentially influences the audience's perception and understanding of a dance-based physical theatre performance.

The following chapter addresses the audience's perception of emotion, as well as the physiological effector patterns where emotions are perceived in the body, such as the face, the body, breath and the voice. This study focuses on emotion within a physical theatre performance, questioning whether the audience can distinguish the three different intended emotive patterns when they are embodied by the dancers during the performance.

CHAPTER THREE: PERCEPTION OF EMOTION

3. Introduction

Chapter two addressed the basic emotive patterns as part of emotional congruence, as well as emotion's fingerprints as ways of understanding that humans have both similarities and personal uniqueness in experiencing and expressing emotions. This chapter interrogates the ways in which humans perceive emotion in others and in oneself[68] within the context of daily life, in order to question how these perceptions could influence the viewing experience of a South African[69] audience during a performance[70].

Since the body, breath, face and voice are primary sites through which emotion is expressed and perceived, this chapter aims to address these sites as markers in human perception during a performance. The impact of sound and music on the perception of emotion is recognised but only tangentially discussed as this does not contribute to the aim of the study.

Emotional intelligence, according to Jonck (2015:79), is the ability to perceive, express and appraise emotion. It is therefore useful to interrogate the ways in which the body, breath, face and voice serve as primary sites through which human emotion is perceived. External emotional cues are often executed with sensitivity and certainty on a verbal and non-verbal level.

3.1 Human perception of emotion

According to Rozaliev, Bobkov, Orlova, Zaboleeva-Zotova and Memitriev (2013:151), "the process of identifying human emotional response is based on the idea of how the human manifests his/her emotions". To perceive something "is to have an inner mental image of it" that in turn, corresponds to "raw brute data, impressed on the subject" (Fulford, Davies, Gipps, Graham, Sadler, Stanghellini & Thornton 2015:305). Based on this statement, perception

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[68] The scope of this study does not include how emotion is recognised in oneself, however, if one cannot recognise emotion in oneself the perception of emotion in others would not be possible. Refer to Löckenhoff *et al*. (2008: 98).

[69] It is acknowledged that the second discourse on emotion refers to emotion as personally unique and dependent on socio-cultural paradigms. However, this study does not take all South African cultures and its diversity into account as this is not the prime focus of the study. The lack of the discussion on South African culture and diversity is, however, addressed in the shortfalls of this study in the final chapter.

[70] Although South Africa is a multi-cultural country, this is not addressed in the study. Forthcoming projects will address the multi-cultural profile.

occurs when humans use specific vocabulary in describing familiar behaviour. The vocabulary used by humans may include sound, movements and/or words/speech. It is therefore implied that humans are able to perceive movements which are familiar to them, especially when trying to accurately perceive emotions.

According to Adolphs (2002:21), perception of body attitude and emotion occur relatively early in time following the onset stimulus. Adolphs (2002:21) therefore suggests that judgements on perception are based on visual features and configurations. Shams and Kim (2010:1) state that "vision is generally considered the dominant sensory modality; self-contained and independent of other senses"[71]. Shams and Kim (2010:1) further opine that visual perception can be enhanced by sound and touch. In conjunction, Hamilton, Wolpert and Frith (2004:493) imply that "the motor system decodes observed actions" and further predict that "performing a concurrent action should influence the perception of an observed action". For example, judging the weight of a box when one is observing another subject lifting it, versus lifting the box oneself. The perceived weight of the box may seem heavier or lighter than it actually is when lifting it oneself (Hamilton, Wolpert & Frith 2004:493).

The recognition of the stimulus, as mentioned previously, requires additional knowledge that is not solely obtained from visual features. Recognition is thus based on a memory of early perceptual properties of visual images (Adolphs 2002:22). It is therefore implied that the lived experience, creating the memory, preparing the perception is vital in order to recognise something in its totality. Byrne (2010:17) explains that the aspects that are perceived are combined to create an assumption, thus the function of perception is to acquire information about the environment. Perception relies on the information flow, which involves visual information about the colour, texture, motion and position of the stimuli, matched with the memory of the lived experience (Byrne 2010:17).

Prinz (2006:138), similar to Byrne, states that perception takes place in sensory systems which include visual, auditory and olfactory features. The process of perception includes physical magnitudes that are converted into mental representations by the sensory systems. Prinz (2006:138) further suggests that perception involves the "generation of internal representations" and "these representations typically represent the mind-external stimuli". As

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[71] It is, however, acknowledged that not all humans are able to see due to disability. Therefore, other senses have to form a more dominant role in perceiving emotion and general happenings.

a result, perception is a conscious representation, where the external stimuli are observed and processed internally by the individual, based on their lived experience. Therefore, perception occurs in degrees that can be measured and expressed based on external stimuli from images, sounds and the sense of smell, which in turn, generates internal understanding.

Noë (2004:1) asserts that perception is a thoughtful activity that involves bodily skills. Noë (2004:1) explains that what humans perceive is triggered and determined by what they have done, what they do and what they are prepared to do. In essence, the ability to perceive something relies on one's personal understanding[72] of the effect that changes in behaviour in external stimuli have on sensory stimulation. Redies (2006:2), similar to Noë, states that perception is mediated by sensory organs and the brain.

As suggested in the introduction of this chapter, emotional intelligence plays a key part in the way humans perceive emotion. It is suggested that emotional intelligence starts with intrapersonal[73] knowledge and skills, foregrounding the interpersonal. The focus of this study is situated in the interpersonal domain. According to Manera, Schouten, Verfaillie and Becchio (2013:1), "perception of the actions of conspecifics works by prediction", which means observers can anticipate how movements or actions will end[74]. In essence, movement of the face, and body serves as markers for emotion. It is implied that perception can only take place after observation of the physical markers provided by the other person are interpreted, relating to one's own emotional awareness to create an understanding of the emotions within a specific situation. Observation is therefore placed in the domain of the interpersonal. It is, however, necessary to mention key points with regard to emotional intelligence in understanding how emotion, expressed by another, is perceived. Caruso and Salovey (2004:xi) list four skills of emotional intelligence:

1) identify emotion;
2) use emotion;
3) understand emotion; and (in the act of communication)

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[72] The ability to comprehend and sympathise with another human being or a situation.

[73] Intrapersonal refers to one's internal environment that is not made public. Interpersonal refers to a relation between two or more beings in observation of actions. According to Iannantuono and Tylka (2012:228), both interpersonal and intrapersonal variables contribute unique insight into the body, and may also work together in predicting information about the body.

[74] This relates to what was previously discussed in chapter two regarding the triune brain. The Protoreptilian forebrain assesses behaviour patterns of the external stimuli, therefore informing humans of a possible outcome and how to react.

4) manage emotion (that of self and consequently that of the other person or people).

The first skill encourages one to become aware of emotions and how they are expressed. The second skill enables one's thinking processes to be influenced by emotions and to match the emotions with the task at hand. The third skill allows one to find out what the emotions mean and to conduct an appropriate analysis to take action. The last skill grants one to stay open to emotions and to integrate them into rational thinking[75]. Similarly, Richards and Barry (2010:85), also list four skills regarding emotional intelligence, which align with those of Caruso and Salovey:

1) self-awareness;

2) self-management;

3) social-awareness; and

4) relationship management.

Self-awareness regards the ability to accurately perceive one's own emotions while self-management is one's ability to manage emotional reaction. Although not directly at play in this study, these are the building blocks towards social awareness. Social awareness involves the ability to grasp the emotions of other individual's which is crucial for this study. Lastly, relationship management facilitates one's responses to other individuals.

It is thus suggested that the four skills as mentioned by Caruso and Salovey (2004:xi), as well as Richards and Barry (2010:85), integrate personal and social interpretations of emotion. Since humans are a highly social species, it is of great significance to be able to interpret, perceive, and comprehend, as well as portray emotional expressions. In order to apply the skills of emotional intelligence and to be regarded as an emotionally intelligent being, one has to demonstrate the ability to perceive the emotional cues presented in the human body.

Although there may be a congruence or similarity in human emotions, as discussed in chapter two, there is still an ongoing debate on whether emotions are accurately and congruently

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[75] Once again, this relates to the triune brain in using all three sections to function and to inform emotion. To reiterate: using the Protoreptilian forebrain to assess behavioural patterns, then using the various sub-divisions of the Paleomammalian brain to inform self-preservation, pro-creation, and various characteristics on how to care for others, communicate with others and behave appropriately in social settings. The Neomammalian forebrain informs our representation of a situation to the external environment.

perceived and interpreted. Jack *et al.* (2012:7241) state that congruity of facial expressions[76] remains the longest standing debate in the biological and social sciences. This "universality hypothesis", briefly discussed in chapter two, claims that "all humans communicate through six basic internal emotional states using the same facial movements by virtue of their biological and evolutionary origins" (Susskind 2008:643). This refers back to what was stated in chapter two about facial expressions displaying particular patterns of movement which leads to a generalised conclusion (Barrett 2017:4). For instance, when frowning it is perceived as anger and when smiling it is perceived as joy.

Inherent in the two scholarly discourses[77], the question remains as to where the main focus of the perception of human emotion is situated. Scholarship aimed at interrogating this question suggests a primary focus on the face and facial expressions. The nature of facial expressions according to Adolphs (2002:23), are informed by aspects of both emotional responses, as well as social communication. These aspects are believed to occur simultaneously in shaping facial expressions.

According to Niedenthal (2005:184), emotional and social information is processed and perceived in and through the entire body. Massaro and Egan (1996:215) state that the interpretation of emotion depends on body, breath and facial expressions, as well as voice quality. Breath according to Brown and Gerbarg (2009:54), plays a vital role in awareness, well-being and humans' ability to deal with physical and emotional stress. It is acknowledged that the four expressive clues or effector patterns are all interconnected and intertwined during the perception of emotion. These effector patterns provide individual stimuli but also form part of the whole. Each of the four expressive clues will, for the sake of clarity in this argument, be discussed individually below.

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[76] As reviewed in the work of Darwin (1999).
[77] See chapter two.

3.1.1 Emotion perceived through observation of facial expressions[78]

Ekman (1970:151)[79] mentions theorists who earlier proposed that facial expressions are universal; these theorists include: Darwin (1872); Allport (1924); Asch (1952) and Tomkins (1962). The mentioned theorists have different theories and expectations related to facial expressions, and acknowledge that facial expressions are influenced by cultural differences. The theories of Klineberg (1938) and LaBane (1947) are also discussed by Ekman (1970:151&152). Klineberg (1938) states that facial expressions are culturally specific, and similarly, LaBane (1947) states that there is no congruent language of emotional facial gesture. It emerges that specific facial expressions and facial gestures are considered to be different (Ekman 1970: 151&152). Ekman (1970:151) explains that there is an overlap or congruence between the facial expression and facial gestures of humans in some cases, but also states that facial gestures may be culturally more variable due to the independence of facial expressions from emotion. For example, the shaking of the head, winking, and the raising of an eyebrow are all independent facial gestures that are seen as culturally variable and not related to facial expressions (Ekman 1970:151).

According to Olszanowski, Pochwatko, Kuklinski, Scibor-Rylski, Lewinski and Ohme (2015:1), the human face is "considered to be a unique social stimulus that provides crucial information about another person". Furthermore, Olszanowski *et al*. (2015:1) states that the face plays a "fundamental role in forming impressions about others" by providing the information that is easily accessible, such as "identity, gender, age, ethnicity, social origins, and physical attractiveness". Ekman (1993:388)[80] states that facial expressions occur when humans see or hear something dynamic, which includes any moving objects or natural events, such as thunder. Facial expressions thus serve communication in context, which is shaped by socio-cultural paradigms, as well as emotion.

Facial expressions are proved to be less intense when humans are asked to relive a past emotional experience. The use of hand signals with facial expressions are believed to express

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[78] According to Skeim et al. (1978:435), cross-cultural data indicate that six emotions can be reliably recognised on the face. These include: fear, anger, disgust, happiness, sadness and surprise.

[79] It is acknowledged that this is a dated source. This source is, however, necessary to track a theoretical timeline in understanding facial expressions.

[80] This study looks at three emotions: anger, fear and disgust; Ekman (1993:388) found that anger, fear, interest and disgust were included in head movements down, back, forward or to the side.

an emotion that is felt more clearly. For instance, hands made into fists along with the set facial expressions will portray anger more clearly, and the hand covering the sad expression on the face will portray the emotion of sadness with more clarity (Ekman 1993:388). Ekman (1993:389) agrees with Tomkins (1963) that each facial expression has a related vocal expression. The face often disguises emotional communication due to humans' ability to skilfully conceal or suppress the facial expressions of their emotional responses[81].

Du *et al.* (2014:1) on the other hand, state that humans can easily distinguish the different facial expressions associated with emotions. This is because the facial movements that are produced should be "different from those of other categories of emotion, but consistent with those of the subordinate categories being expressed". Du *et al*. (2014:1) therefore implies that the facial expressions of disgust, for instance, should be vastly different from the facial expressions of anger. Du *et al*. (2014:1) also suggest that there is a "repertoire of facial expressions" used by humans that is "better described using a rich set of basic and compound[82] categories rather than a small set of basic elements".

According to Witkower and Tracy (2019:3), the 'Facial Action Coding System' (FACS) is a tool used for identifying "facial muscle movements that communicate emotions" and it is widely viewed as "the most reliable and well-validated tool" for reading facial emotion. Similar to Witkower and Tracy, Olszanowski *et al*. (2015:1) state that the Warsaw Set of Emotional Facial Expression Pictures (WSEFEP) is a new "database of basic emotional expressions". The WSEFEP pictures contain 210 "high-quality pictures of 30 individuals" who display six ur-emotions: enjoyment, fear, disgust, anger, sadness, and surprise (Emotional Facial Pictures Database 2019). This set of pictures is widely recognised by the scientific community and frequently used as research material, due to the fact that the pictures are carefully selected to fit the humanly congruent markers of the expressions of ur-emotions (Emotional Facial Pictures Database 2019).

White and Li (2006:21) assert that "all faces have the same parts" and this grants individuals the ability to perceive other faces and the emotions they portray. Expressions are perceived "from the conjunctions of brow, eye and mouth shapes" (McKelvie 1973 and White 1999 cited

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[81] Humans often hide or suppress their emotions so that they are not recognisable to the outside world.
[82] Refer to chapter two for information on Basic and Compound emotions.

in White & Li 2006:21). Facial expressions, according to Collishaw and Holes (2002:893), as well as Meulders *et al*. (2005:781), depend on detailed facial features and specific spatial relations among the parts of the face, in order to express an emotion accurately.

Leder and Bruce (2000:514), similar to Collishaw and Holes (2002:893), as well as Meulders *et al*. (2005:781), explain that the face is made up of independent features that are considered when emotion is perceived. These features include the eyes, nose and mouth, but they differ from one another in various dimensions, such as size, colour, texture and shape. Durand *et al*. (2012:2) discuss inversions of the face and how they affect the ability to read emotions accurately. The theoretical approach of Diamond and Carey (1986) as discussed by Leder and Bruce (2000:515), states that faces contain local and configurable information of two types: "first-order relational and second-order relational information". First-order relational information consists of the spatial relations of the different parts of the face; and second-order relational information consists of the size of these spatial relations.

It is thus implied that unlike other objects that can be recognised with a missing part, the face depends on detailed and consistent features with specific spatial relations (Reed & Stone 2006:73). The face needs to be viewed with all its features with the correct spatial orientation and relationship in order for emotion to be perceived. Yet, Eimer (2000:674) asserts that facial recognition relies on a 'holistic' representation, which means that other parts of the body are observed in order to accurately recognise the emotion portrayed. De Gelder and Nadjikhani (2006:583) also suggest that emotions are expressed by using the *whole* body. Witkower and Tracy (2019:3), like many other theorists, notice the lack in research regarding bodily expression of emotion, therefore their focus is on "specific bodily behaviours that communicate several distinct emotions"[83].

Despite the limited theoretical and practical discourse existing on the relation between emotion and body expression in comparison to vocal and facial cues, recent studies show that the human brain responds to body expressions in a similar manner to facial cues (Gu, Mai & Luo

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[83] Witkower and Tracy (2019:3) investigate possible coding systems that include bodily displays, which will provide a well-rounded understanding of nonverbal cues of emotion in robots and in humans. Artificial intelligence is rapidly taking over basic human tasks, and scientists have been studying ways in which robots can display emotional body language, as it would improve sociability and its ability to generate empathy. Scientists are establishing the different joint positions to various emotion expressions in order to contribute to the body language of robots (Beck, Cañamero & Barn 2010:464). This is discussed in chapter two under human emotion as congruent.

2013:1). The face is not isolated from the rest of the body; thus, efficient emotion perception is not only driven by the structural features of the face alone, but includes the descriptions of the social context, voices, body expression, and visual scenarios (Barret, Mesquita & Gendron 2011:287; De Gelder & Nadjikhani 2006:583; Kret *et al*. 2013:1).

According to Reed and Stone (2006:73), expressions from the body, breath and voice can be recognised even with the absence of certain individual parts. According to Meeren *et al*. (2005:16518) the perception and recognition of facial emotions also rely on body expression. Civile and Obhi (2015:368) however, state that facial interactions often interfere with an accurate perception of body expressions. It is believed that body expression has a huge influence on how facial expressions are perceived. The following section will discuss the perception of emotion in body expressions.

3.1.2 Emotion perceived through the observations of body attitude

According to Kana and Travers (2012:446), body expression allows one to make social interpretations from a distance. This allows the observer's behaviour to be adjusted to match the demands of the individual expressing the emotion, resulting in social benefits. Camurri *et al*. (2003:214) state that emotional cues situated in the body are more challenging to convey and arguably to perceive, due to the high degree of flexibility contained in the moving body.

As discussed in chapter two, expressing emotion through the body relies on a diverse network in the brain due to the different types of body-relevant information that needs to be portrayed (Kana & Travers 2012:446 & 452). Interpreting actions and emotions from body expression involve perceiving visual representations of physical motions in the joints and limbs. Deal *et al*. (2012:1087) explain that most corpora of emotional expressions include those of the face and the voice. There is a large gap in research related to the emotions as expressed through the body. Deal *et al*. (2012:1087) do however, explain that emotion expressed in the body can be recognised in static poses and body orientations[84] both sitting and standing. Furthermore, they assert that the major areas involved in body expression are the head, arms, legs and body lean/stance[85].

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[84] Body orientation refers to the body's relation in space.
[85] Referring to the body's orientation in space.

Similar to faces, the body allows humans to perceive and convey information about gender, age, intentions and emotional states (Reed *et al*. 2003:302). The body is a rich source of information and in order for individuals to perceive information portrayed through the body, careful observation of the shape and relation of the body parts need to be made. The subtle differences in spatial relations of the body parts are distinguished in order to recognise body positions (Reed *et al*. 2003:302). According to Castello *et al*. (2007:1), distinct emotions are often associated with different body movement qualities, such as tempo, amplitude and fluidity of movement. Castello *et al*. (2007:11) assert that the recognition of emotion in the body relies on the expressivity of the gestures and movements. It is through movement expressivity that individuals are able to use one gesture to portray a number of distinct emotions through adapting the quality of the movements. Anatomical features thus play a vital role in adjusting movements; these anatomical features refer to our limbs, as well the muscles that move the limbs.

Coulson (2004:119) explains that the anatomical features are responsible for portraying a particular emotion. Coulson (2004:119) refers to the work of Aronoff, Woike and Hyman (1992), who analysed the body expressions and orientations involved in Ballet[86]. For instance, an angular body orientation is used when playing threatening characters, and a rounded body orientation is used when portraying warm or friendly characters. Upright body orientations were perceived more 'positively' than forward leaning body orientations. These body orientations are important in the perception of emotion. Emotions, such as anger, for instance, make use of a forward body orientation. Emotional expression in the body therefore relies on more than the quality of movements and gestures. There are specific movements which the body executes as noted by Camurri *et al*. (2003:214).

Camurri *et al*. (2003:214), explain the importance of being able to distinguish between propositional and non-propositional movements. The ability to distinguish between propositional and non-propositional movements assists in the perception of emotion expressed through the body. Propositional movements are scripted and give distinct meaning; for instance, clenched fists express anger and raised arms express joy (Camurri *et al.* 2003:214). On the contrary, non-propositional movements are not scripted, but are movements that are

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[86] This is valuable as Ballet influences my style of physical theatre, as well as my choreographic style. According to Alterowitz (2014:[sp]), ballet requires the body to be in an upright and elegant position, which asserts a sense of "nobility, grace and etiquette".

naturally and emotionally embodied, based on fundamental elements, such as tempo and force. When these elements are combined they create a vast number of movement possibilities (Camurri *et al*. 2003:214)[87]. Although movement possibilities are increased, there are other aspects[88] in the body that may influence how these movements are expressed and in turn, perceived.

Kana and Travers (2012:446), state that the ability to read and interpret body expression is a vital skill that one uses in order to navigate oneself within the social world. The ability is thus an interpersonal skill. However, an interpretation of body expression may be influenced by perceptional filters, such as "gender, personality characteristics and neurocognitive processes" (Kana & Travers 2012:446). Although body expression may be interpreted differently due to certain influences, Watson and De Gelder (2017:2) posit that there are several cases where emotions are similar across different cultures, genders and age groups[89], thereby suggesting the possibility that the perception of emotion can be humanly congruent on a broader scale than previous research suggests. For instance, breathing is a human congruence as all humans have to breathe in order to stay alive.

In order to execute body movement one needs breath. Lessac suggests that breathing improves body alignment and that optimal alignment improves breathing (Lessac 1981:61). Breath is also directly related to emotion. Sarkar (2017:157) states that breathing changes emotional states and that emotional states in turn, affect breathing patterns. Breathing thus has an effect on the body, as well as on the expression and perception of emotion, just as the body and emotional states have an effect on breathing patterns. The following section will discuss breath and how emotion can be perceived through breath.

3.1.3 Emotion perceived through observation of breathing patterns

Breath, according to Hackney (2002:54), is "the key to life, movement, and rhythm". Hackney (2002:55), states that breath influences all aspects of movement. Owing to breathing being a life giving source and as such, an automatic and spontaneous process. Feelings, thoughts and

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[87] This study relies on both movement groups, which will be analysed and discussed further in the next chapter.
[88] Such as personal-uniqueness and socio-cultural paradigms that have an influence on how personal uniqueness is expressed.
[89] This aligns with emotion congruence as discussed in chapter two.

consciousness can influence breathing, as breath intersects with internal changes. Hackney (2002:54) explains that breathing can consciously be altered to affect movement, thoughts and feelings. Nair (2007:184), similar to Hackney, states that breath assists the performance of "all the sensory and motor functions of the body". Furthermore, Nair (2007:184) states that "breath is mind in action: the movement of breath is the movement of the body as well as that of the mind". Breath is thus influencing and being influenced by the bodymind.

Sarkar (2017:157) states that breathing is a physiological function that is both voluntary and involuntary. Breathing changes in response to emotional states, yet breath can also cause change in emotional states when altered (Sarkar 2017:157). Homma and Masaoka (2008:1011) mention that breathing co-exists with emotion and "change in response to changes in emotion". Philippot *et al*. (2002:2) concur that emotions can be altered through different types of breathing. Del Negro *et al*. (2018:352) suggest that a breathing pattern may provide a signal that affects emotional regulation.

Simpkins and Simpkins (2013:210) state that "breathing is one of the most accessible internal sensations involved in emotion" as it "reveals a great deal of information" regarding the individual's feelings. According to McIntosh (1997:173), breathing patterns are influenced by facial expressions, which influence brain temperature that has a direct impact on emotional states. It is predicted that facial expressions that decrease the volume of nasal air, will increase temperature and therefore bring about so-called 'negative emotions' (McIntosh 1997:173). An increased volume of air leads to a decreased temperature and a more positive emotional outcome.

Zald and Pardo (1997:4119) discuss olfactory processing closely linked to breathing. Homma and Masaoka (2008:1014), as well as Zald and Pardo (1997:4119) suggest that the sense of smell can evoke emotion. For instance, the smell of smoke may evoke fear and in turn. affect facial and body expressions in response. This implies that breathing will not rely on facial expressions as suggested by McIntosh, but will have an effect on facial expressions and vice versa.

3.1.4 Emotion perceived through the observation of voice and speech

In general, physical theatre dancers produce vocal sounds while portraying their emotions. Owing to the effect voice and sound have on the perception of emotion, these two are purposefully excluded in the choreography[90]. The vocal sounds in physical theatre are often not produced deliberately, but allow the dancers to become more embodied and to stay focused on the specific emotion they are portraying[91]. This indicates the importance of sound and voice in expressing and perceiving emotion. Belin *et al.* (2004:129) assert that the human voice is the 'auditory face' that conveys important information. Belin *et al.* (2004:129) believe that vocal perception is similar to that of facial perception.

Although the process of emotions is nonverbal, Goleman (1996:97) suggests that emotion is often expressed verbally. Bachorowski (1999:53) states that the expression of emotion in speech sounds[92] and the ability to perceive and correspond to the perceived emotions are fundamental to human communication. Humans provide information regarding their emotional states through speech on a daily basis. According to Bachorowski (1999:53), an external cue to immediate arousal is provided by the acoustic properties of speech. This external cue provides information on whether the arousal/stimuli were pleasant or not. Listeners can make relatively accurate evaluations of emotional states without visual stimuli. Bachorowski (1999:53) gives the following examples of voice expressing emotional states: if someone is feeling cheerful, their voice may be unwittingly loud; if someone is feeling scared or fearful their voice may have a tremor; and if someone were speaking to another individual they find sexually attractive their voice may be more high pitched than usual[93].

The frequency[94] and amplitude[95] of the sound are used when interpreting emotional states in vocal cues. According to Belin *et al.* (2004:129), the human voice is the most important sound in our auditory environment, as it is the key to our social interactions. Vocal features can "carry more than one type of information" (Benlin *et al.* 2004:130). Speech and identity information

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[90] The reason for not incorporating speech and deliberate vocal cues in this study is explained and discussed in chapter two and four, but the sounds that are organically uttered are allowed.
[91] This was also observed in the dancers in the choreography, in question in the study.
[92] Speech sound results from a "combination source energy, produced by vibration of vocal folds", which is then filtered by the vocal tract above the larynx (Bachorowski 1999:54).
[93] There may be differences due to socio-cultural paradigms.
[94] Frequency is the rate of the repetitive event (Lombardi 2002:1).
[95] Amplitude refers to the extent of the vibration that is presented. It also predicts the loudness and strength of the sound (Amplitude of Sound 2019).

for instance, is carried by speech formants[96] which filter and convey important phonetic information.

3.1.4.1 Emotion perceived through sound and music

Sound is also related to music and other external environmental sounds. Music and environmental sound also have a major impact on how emotions are perceived, as mentioned in chapter one. It is acknowledged that music does not link to the purpose of this study, but it is necessary to mention, due to the purposeful reason why music was not used. Music was not used due to its strong impulse to trigger emotion and the perception of emotion. Droit-Volet *et al.* (2013:1) confirm that music is "remarkable in its ability to induce emotion in listeners." The emotional quality is influenced by the musical mode and lies in major and minor keys, sounding happy when played in the major key and sad when played in the minor key[97] (Droit-Volet *et al.* 2013:2; Hunter *et al.* 2010:47). Yang, Lui and Chen (2006:81), note that the subjective nature of human beings also plays a large role in how emotion is perceived when listening to music. Listening mood, age, environment, personality and cultural background, to mention a few, all influence how emotion is perceived when listening to music.

Baumgartner *et al.* (2006:34) assert that emotional experiences rely on a combination of stimuli from different modalities. This includes music, as it is often used to enhance the emotional impact when watching a movie. Based on subjective experiences, emotional experiences are enhanced when combining them with visual stimuli and music (Baumgartner *et al.* 2006:35). Hunter *et al.* (2010:47) posits that listening to music enhances the ability to perceive and evoke emotions in the listener. Thus listeners often start feeling what they perceive when a piece of music is playing while visual stimuli are present. Feelings are the "unreflective emotional engagement with the world beyond the body; it is not a consciousness of oneself, either of one's bodily condition or of oneself as experiencing an emotion" (Goldie 2002:241). Humans are, however, capable of noticing the feeling towards something, such as music for example. With the visual stimuli present, humans are able to perceive emotions more clearly as there is an inner mental image that corresponds with the music, as well as the stimuli that are portrayed.

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[96] Formants are the concentration of acoustic energy in relation to a certain frequency (What are Formants? 2005).
[97] It is acknowledged that the perception may be shaped by socio-cultural backgrounds. This does, however, fall outside the scope of the study.

In this study the audience watched the dancers' portray three emotions, performed as visual stimuli. Owing to the aim of determining whether the audience can accurately perceive the emotions that are portrayed through dance, music could not be incorporated. Music would have influenced not only the audience's perception of the emotions, but the dancers' perception and expression of the emotions as well. It is implied that the physiological changes in facial expressions, body expressions and in breathing patterns have an impact on emotion and how emotion is portrayed and perceived (McIntosh 1997:172).

3.2 Audience Perception of Emotion

In light of what has been discussed in section 3.1 in terms of the way in which humans perceive emotion, this section will survey current scholarship of audience perception of emotion with reference to the various markers discussed above. This section will also highlight the ways in which the two scholarly discourses, discussed in chapter two, are combined when creating and understanding emotion in theatre. Theatre, according to Radbourne *et al.* (2009:17), is an interactive platform of communication between the performers' actions and the audience's reactions. Owing to the interrelatedness between human congruence and personal uniqueness, the aim of the performance was firstly for the performers to portray the emotions congruently; and secondly, to determine the audience's perception and recognition of the portrayed emotions through their personally unique lens.

Audience members expect a performance to be an absorbing experience that arouses emotions "stimulating a physical reaction, soliciting their memories and fantasies and triggering their cognitive development" (Radbourne *et al.* 2009:18). Audience members seek an authentic experience that relates to the audience's reality, truth and believability, which has an effect on how the audience will perceive the emotions presented in the performance (Radbourne *et al.* 2009:20). According to Nair (2007:20), the audience's previous experiences and personal opinions develop preferences and prejudices "in the process of perception of a theatrical event". These perceptions have a strong impact on cognitive and emotional reactions during and after the performance. Nair (2007:20-21) further states that the audience members' cognitive and emotional profiles play dominant roles in how an audience responds, explaining that an audience's emotional process starts with a stimulus from the stage that is analysed consciously or unconsciously and compared to their personal experiences, as well as the perceived experiences of other individuals. These cognitions and emotions are evaluated and

transformed into adequate feelings or cognitive actions through the aesthetic response. Nair (2007:21) asserts that perception of stage performances cause:

1. cognitive knowledge that is gradually processed by means of the automatic responses; and

2. persistent and active feelings throughout the performance.

Nair (2007:24) also states the perception of emotion is done by an individual from their "own position in space and time and his own combination of experiences and needs". Viewing certain emotions, such as anger for instance, is an effective way for the release an emotional build up, known as a cathartic experience (Bushman 2002:724)[98]. This implies that audience members are able to experience a cathartic moment or moments when watching a performance where certain emotions are portrayed by the performers. According to Solbakk (2006:141), Aristotle's concept of poetic catharsis may lead to a more accurate learning and decision-making process regarding certain challenges that are present in daily living situations.

Walmsley (2013:75) states that catharsis can be seen as a therapeutic benefit of the arts as it is viewed as an "emotional cure" that is "artificially stirred" in the audience, which is "universalised" lifting audience members out of themselves into a state of "sympathetic ecstasy". Scheff (2007:107) regards catharsis as a distancing of emotion, but highlights the importance of being able to identify emotion. This implies that theatre places emotions at an aesthetic distance. Therefore, creators of theatre know that the absence of emotion in their work will lead to a failed performance as the audience members must be able to identify with some characters – essentially, the audience members are empathising with the characters.

3.2.1 Humans as members of an audience

It is implied that the difference between human and audience perception relates to the social context in which emotion is perceived. Perception ultimately allows humans to communicate in everyday life and to empathise with other humans, whereas perception in a theatre setting allows audience members to understand and relate to the characters and narratives that are portrayed on stage. The difference is that audience members do not have to participate in the conversation; they have to be able to empathise with the situation presented in the performance. Active involvement of the audience members thus happens in the

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[98] Bushman (2002), discusses 'catharsis theory'. This is valid in understanding the meaning of catharsis and contextualising how audience members experience catharsis.

intrapersonal[99]. The behavioural clues or effector patterns expressed by the performers will thus be perceived and interpreted by each audience member. The perception of emotion through facial expression, body expression, breathing patterns, and voice and sound will be discussed below, with specific reference to how audience members perceive emotion in theatre.

Stevens *et al.* (2009:800) developed a portable Audience Response Facility (pARF), which is "a set of hand-held computers…that have been programmed to record and synchronize one- or two- dimensional ratings from up to 20 audience members as live or recorded dance, music, theatre, multimedia performance or installation takes place". The pARF was specifically designed to capture reactions to live performances in a real-life group setting instead of in a laboratory, which is beneficial for artists "to compare artistic intention and audience reception" (Stevens *et al.* 2009:801). It is implied that artists and choreographers have the need to inform and communicate very specific ideas to their audience members. It is therefore important for audience members to perceive and recognise the intentions of the artist or choreographer. The above stated relates directly to the problem statement of this study. According to Bachrach *et al.* (2015:2), audience members should not just sit back and be moved by a work of art, but rather have an active attitude, processing the impulses provided on stage in their interpersonal domains. The attitudes, based on personally unique experiences of the audience members, may differ due to different cultural backgrounds as mentioned above, which affects the way the art work is perceived (Bachrach *et al.* 2015:2).

According to Tsapatsoulis *et al.* (2002:144), the emotions that attract the most interest from humans are anger, fear, disgust, surprise, joy, and sadness. The discussion below draws from the perception of emotion in animated characters, as well as characters portrayed on the stage or in film. The discussion includes how animators design cartoons for the audience to perceive the intended emotions, based on the generally accepted behavioural markers of emotion. An understanding of this will contribute to the final phase of the study, where the data of the audience's perceptions of the three emotions that were portrayed, will be analysed.

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[99] This is not always the case, taking into account that there are different performance genres and different socio-cultural paradigms which may involve audience participation.

3.2.1.1 Emotion perceived through facial expression by an audience

In addition to neutral facial expression, there are six ur-emotions that have distinct humanly congruent facial expressions: happiness, sadness, disgust, fear, anger, and surprise (Pardás, Bonafonte & Landabaso 2002:3624; Tinwell *et al*. 2011).

According to Tinwell (2011:6), Ekman and Friesen's (1978) Facial Action Coding System (FACS) "has been integrated within facial animation software to achieve facial expression of emotion in realistic, human-like video game characters"[100]. FACS is the most comprehensive and widely used systems for describing facial expressions (Cohn, Ambadar & Ekman 2007:203)[101]. Tsapatsoulis *et al*. (2002:144) postulate that the moving picture expert group (MPEG-4) indicates an alternative mode to facial expressions "and the underlying emotions that are strongly influenced by neurophysiological and psychological studies". The framework of MPEG-4 is utilised by Facial Animation Parameters (FAPs), which strongly relate "to the action units that constitute the core of the FACS" (Tsapatsoulis *et al*. 2002:144).

According to Li *et al*. (2001:1), human faces are difficult to animate directly due to the many parameters that need to be controlled for realistic facial expressions. In order for facial expressions to be perceived with ease, Li *et al*. (2001:5) place control lines upon the key features of the face, such as the eyes, mouth, chin and nose. These control lines are placed in the same order to correspond with different emotions. Similar to Li *et al*. Perveen, Gupta and Verma (2012:1) state that the regions where the information for facial expressions lie are in the eyes, eyebrows, and mouth. There is a growing expectation among audience members for realistic avatars[102] that truly resemble human emotion, which must indicate for audience members watching live performances to have some desire to be able to perceive emotions

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[100] The audience's perception emotion will include the perception of animation characters. Understanding the perception of emotion in animated characters will create an understanding of how audience members perceive emotion in theatre, as it includes perceiving emotion through observing/watching creative work.

[101] Through the use of action units, FACS gives coders the ability to manually code nearly all possible facial expressions, including the smallest visually discriminable facial movements (Cohn, Ambadar & Ekman 2007:203). FACS allows researchers, as well as animators to have a flexible range of detail in the facial expressions portrayed, which is important for the audience who are meant to perceive and recognise the emotions at a specific time or moment.

[102] This draws on Emotion as Humanly Congruent and the need for humans to have a universal understanding of emotion and how it is portrayed and perceived. Through researching avatars and the digital creation of cartoons, theatre makers are able to develop an awareness of where emotion is observed in the face, body, breath and sound by an audience. Through this understanding, theatre makers and performers can possibly embody emotion that is more realistic, and as such more believable, rather that theatrical.

more accurately (Yun, Deng & Hiscock 2009:1)[103]. This is due to the accuracy that is triggered by familiarity.

Yun, Deng and Hiscock (2009:3) further state that when the emotion expresser and the emotion perceiver have the same cultural background, the perceiver experiences the emotion at a higher rate than the perceivers who are from a different cultural background. It is, however, acknowledged that cultural backgrounds have little effect on facial expressions due to the human congruence of facial expressions (Yun, Deng & Hiscock 2009:3). It is as such, foreseen that the personal uniqueness of each audience member will influence their recognition and perception of the emotions expressed. According to Parke and Waters (2008:1), "the human face is interesting and challenging because of its familiarity". The face is used as the primary part of the body to recognise individuals, due to the human's ability to recognise "specific faces from a vast universe of similar faces" and the ability to "detect very subtle changes in facial expression" (Parke & Waters 2008:1).

The skills of recognising are learnt early in life, "and rapidly develop into a major channel of communication" (Parke & Waters 2008:1). Accordingly, the animator pays "a great deal of attention to the face" (Parke & Waters 2008:1). Perveen, Gupta and Verma (2012:2), for instance, apply "shape based feature extraction technique known as Template Matching". This technique tracks patterns from human facial features and correlates them to the animated features. The facial features of a human are extracted through template matching procedures, and then used for dimensionality reduction (Perveen, Gupta & Verma 2012:2). The dimensionality reduction is extracted from the input image[104] features such as the mouth, eyes and eyebrows, so that the relevant information can be extracted to match that of the animated character (Perveen, Gupta & Verma 2012:2-3).

Based on the theory of Pardás and Bonafone (2002:2), it has been indicated that there are at least six emotions "universally associated with distinct facial expressions: happiness, sadness,

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[103] Tinwell *et al*. (2011:2) describes the Uncanny Valley phenomenon, which implies that "virtual characters approaching full human-likeness will evoke a negative reaction from the viewer, if the character's appearance and behaviour differ from the human norm". The negative response evoked by the uncanny is due to the reminder that the phenomenon forms of the individual's own mortality, as well as the threat perceived by the character. Tinwell *et al*. (2011:2) specifically addresses the lack of facial expressions in the upper part of the face, investigating whether this lack increases the uncanniness of a character. The uncanny is described as the audience's inability to distinguish between animate or inanimate, real or unreal objects (Jentsch 1906:[sp]; Freud 1919:226).
[104] A human face.

surprise, fear, anger and disgust". It is therefore implied, from the above mentioned, that an audience can possibly distinguish between the six emotions[105] in both animated characters and live performers. Mauda, Mesquita, Tanida, Ellsworth, Leu and Van de Veerdonk (2008:366) suggest that "both similarities and differences in the categorisation of facial behaviour have been found, but despite increasing attention to the differences, the similarities across cultures are still impressive".

Although dancers use their bodies more vigorously than their faces, facial expressions could have an influence on the quality of dance and influence how audience members perceive the movement as implied from the discussion above. Stevens *et al*. (2009:800) state that dance has been found in all cultures since antiquity, therefore making dance relevant to psychology and a sophisticated means of expression. In dance and performance, ideas are expressed through "movement and stillness, rhythms, and sculptures in space and time" (Stevens *et al*. 2009:801). The perception of body expressions form a vital part of understanding dance, as well as dance-based physical theatre. The section to follow will discuss body expressions present in dance, as well as dance-based physical theatre and how they are perceived by an audience.

3.2.1.2 Emotion perceived through body expression by an audience

According to Bachrach *et al*. (2015:4) and Cross *et al*. (2011:2), when audience members watch dance performances, their motor system[106] is engaged. This implies that audience members are able to engage with movement patterns that are portrayed. As such, the audience may become emotionally involved with what is performed and by the emotions expressed on stage. Cross *et al*. (2011:3-4) aver that the network "comprising premotor, parietal, and occipitotemporal cortices" is believed to assist individuals in perceiving and recognising other individual's bodies in motion to "decode the goals and intentions underlying their movements". Findings, according to Cross *et al*. (2011:6), have not yet been able to explain how and why audience members derive intense pleasure from watching dance. Cross *et al*. (2011:6) questions whether it is due to the fact that audience members "embody forms and movements articulated by the dancers within their own motor system, consistent with the embodied

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[105] Human congruent emotions are mentioned in chapter two.
[106] System within the brain.

stimulation account of aesthetic experience", or whether the pleasure comes from a purely visual experience.

Bachrach *et al*. (2015:5) argue that dance, being an aesthetic experience containing bodily movements, associates with the audience members' emotional responses due to the bodily movements and gestures that can be explicitly expressive. Contemporary dance, however, cannot be derived from explicit emotional expressions or recognisable gestures as this style deliberately avoids both elements (Bachrach *et al*. 2015:5-6). In this case, the experience could emerge by integrating "physiological or cognitive states between the dancers and the public" (Bachrach *et al.* 2015:6). Freedberg and Gallese (2007:197) suggest that audience members are "familiar with feelings of empathetic engagement with what they see"; and these feelings may "consist of the empathetic understanding of the emotions" that are portrayed by the work of art/choreography.

Egges and Magnenat-Thalmann (2005:34&35) provide an idle motion model for commonly observed behaviour types. This model is used to create realistic body expressions for animation characters. The types of behaviour that were observed include:
1. Posture[107] shifts;
2. Continuous small posture variations; and
3. Supplemental idle motions.

The first behaviour type, involves shifting from one resting position to another; for instance, shifting from a sitting position to a standing position or shifting weight from one leg to another when standing. The second behaviour type indicates the constant movement that is present in the body due to breath. An example of this behaviour includes the small movements, such as the torso moving. The third behaviour type involves the interaction with one's own body; for example, touching one's hair or face (Egges & Magnenant-Thalmann 2005:34). These three behavioural types are adjusted to portray emotions more accurately, known as Emotional Balance Shifting[108]. The different intervals of emotional states, along with the different body

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[107] It is acknowledged that there are various connotations attached to the word posture; therefore, I will be referring to body alignment in the discussion following the three behaviour types.
[108] Having the ability to make balance shifts, regardless of the emotion that is being expressed (Egges & Thalmann 2005:35).

alignments, are mixed and matched to portray emotion, making it easier for audience members to perceive the intended emotions (Egges & Thalmann 2005:35).

According to Shapiro (2011:1), audience members tend to perceive movement and human-like behaviour in animated characters when the virtual character matches the expectations of the human viewer. These expectations are based on the familiar behavioural patterns that audience members have experienced in their own behaviour and in observing others in real-life situations. Similar to Shapiro (2011), Beck, Stevens, Bard and Cañamero (2007:1) state that body expression is the most "appropriate medium for robots to display emotions and … can be used to improve the expressiveness of humanoid robots"[109]. Body expression it is suggested, can be vital in both the portrayal and perception of emotion. It is further implied that the movements need to be natural and contextually appropriate in response to the time frame and stimuli (Shapiro 2011:1). If audience members are able to perceive animated characters' body expressions, they should be able to perceive emotive body movements and gestures expressed by dancers.

According to Cassel, Vilhjálmsson and Bickmore (2001:477), spontaneous body movements are not easily generated in animated characters, thus leaving the animated character seem stilted, as if speaking an unfamiliar language. It is for this reason that animators rely on video footage from actors reciting the text as a reference to capture the data for the animated character (Cassel *et al*. 2001:477). This method is, however, expensive as actors have to be paid to act out the script. Cassel *et al*. (2001:477) therefore, suggest that using the Behaviour Expression Animation Toolkit (BEAT), which allows animators to animate "a human-like body using just text as input", thereby using only linguistic and contextual information to control body movement. BEAT contains a set of rules "derived from state of the art in nonverbal conversational behaviour research", and animators can insert rules "of their own concerning personality, movement characteristics, and other features that are realised in the final animation" (Cassel *et al*. 2001:477).

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[109] This relates back to what was previously discussed about the uncanny valley, which occurs when something is more human-like; therefore, people will feel alienated toward it (Destephe, Zecca, Hashimoto & Takanishi 2014:1152).

Unlike animation, dance-based physical theatre is more abstract and does not execute human-like behaviour or every day movements[110] within a linear context. Dance-based physical theatre tends to shape everyday movements and exaggerate them through whole body movements. As a result, it is suggested that body expression in dance-based physical theatre would not be perceived as easily as that of animated characters or in still pictures. Breathing is the key to movement, as mentioned previously; therefore, it is likely that breathing patterns may assist the audience when perceiving dance and emotion. The following section will discuss how breath is perceived by audience members.

3.2.1.3 Emotion perceived through breathing patterns by an audience

Quinlivan (2012:4) discusses breath in film and the perception thereof, stating that breath is often perceived through the sound and body movements that accompany breath. Breath is often heard rather than seen, therefore revealing "something about the inside of the body that is visible (or audible) on screen" (Quinlivan 2012:6, brackets inserted). This statement implies that emotions are often revealed through the observation of the body movements of the chest and stomach[111] area of the character, and through that observation, it can be assumed how the character is feeling at that point in time. The same happens in theatre, but the audience members are not directed toward the expressions they are supposed to focus on, as in film.

Tsoli, Mahmood and Black (2014:1) explain that breathing, as previously touched on, is an important part of body attitude in expressing and conversing emotion; therefore, life-like breathing in animation characters is vital. Furthermore, Tsoli, Mahmood and Black (2014:1) suggest that breathing is perceived through the change in torso shape, as well as body alignment due to the lung volume and breathing type[112]. It is thus implied that each emotion has a different type of breathing, and differs in the amount of oxygen that is inhaled and exhaled. Shapiro (2011:3) suggests that breathing is independent of the skeleton and is predominantly in the chest area and diaphragm in animated characters. According to Jerritta *et al*. (2011:411), the perception of breath depicts how deep and fast an individual is breathing, which in turn indicates "negative balance and arousal".

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[110] Dance is an extra-daily activity.
[111] Breath can be observed through the motion of the "ribs and diaphragm and passively through other muscles, such as those in the abdomen" (Zordan, Celly, Chiu & DiLorenzo 2004:29).
[112] This may include tempo, amplitude or depth of breath.

Zordan, Celly and DiLorenzo (2004:29) state that creating a "believable moving body… and to visually bring a character to life, the movement caused by breathing is invaluable". The visual motion of human breath "is derived from two actively moving muscle groups - the diaphragm and the intercostal muscles attached to the ribs" (Zordan *et al*. 2004:31). These two active components "lead to the movement in the chest, shoulders, arms and abdomen and even, through the spine, the involuntary motion of the head associated with breath" (Zordan *et al*. 2004:31).

These unique parts of the body involved in breath move in a synchronised manner, which means the emotion felt in the body will affect the amount of body tension. This will in turn, affect how much breath can be inhaled and exhaled affecting the movement of the chest, shoulders, arms, abdomen and spine (Zordon *et al*. 2004:31). For instance, the emotion of anger requires the body to hold a lot of tension, yet the breathing is deep and fast. The forward body orientation allows the breathing to be deep and fast, which visually shows the motion of the breath in the chest, abdomen, arms and shoulders. Therefore, the audience is able to see the breathing in the body.

Breath is the starting point of all movement in the body, which means that expression of emotion in dance/physical theatre can draw from breath. According to Sabatini (2000:[sp]), there is a constant exchange that takes place between the body and the outer world. It is therefore implied that breath stimulates movement and vice versa.

It is further implied that the ability to perceive breath makes it easier to perceive the emotion that is experienced. It is also suggested that sound is often triggered by breath. The following section will discuss the impact of the use of sound and voice when perceiving emotion, and how sound and voice influence the perception of emotion.

3.2.1.4 Emotion perceived through voice and speech by an audience

Li *et al*. (2001:1) state that speech signals often drive facial expressions due to the complexity of facial expressions. Li *et al*. (2001:1) also mention the difficulties in analysing speech; therefore, the emotions in speech were measured by its intensity: 0%; 25%; 50%; 75%, or 100% in the experiment Li *et al.* (2001:2) conducted, where the acoustic features of this experiment were extracted from pitch and phrases. Neutral, among sadness, happiness and

anger was the most recognisable, whereas happiness and anger were the most poorly recognised of the four emotions portrayed in the experiment done by Li *et al*. (2001:3-4). Furthermore, Li *et al*. (2001:4) opine that audience members or listeners often confuse happiness and anger.

Nagasaki and Komatsu (2004:23) suggest that emotional speech can be perceived through the duration, slope, and rising/falling of the sound[113]. Characteristics of sound in speech can be perceived through the range of acoustic parameters including: loudness, frequency and voice quality (Schirmer & Adolphs 2017:[sp]). Schirmer and Adolphs (2017:[sp]) suggest that loudness and frequency "each correlate positively with arousal". It is therefore implied that any type of emotional excitement will increase the loudness and frequency levels presented in the voice. Schirmer and Adolphs (2017:[sp]) do, however, state that "fewer emotions can be perceived from the voice than from the face", as was hinted at above.

According to Kirandziska and Ackovska (2013:121), emotions "are correlated with the values of some sound features extracted from human speech like pitch, mean, amplitude standard deviation or tempo". Kirandziska and Ackovska (2013:121) also suggest that humans can experience many emotions simultaneously, which result in other humans perceiving the emotions differently[114]; this is called emotion ambiguity.

Scherer (1995:235) states that vocalisation of emotions is important due to its representational functions that have an effect on the change in physiology. Vocalisations serve specific communication functions that involve "acoustic patterns that are similar across species" (Scherer 1995:236). Humans have non-linguistic vocalisations, also referred to as interjections, such as: "yuck"; "oh", "ai", and "ouch" for instance, that sound similar when uttered by humans in different cultures (Scherer 1995:236). These interjections have sharp distinctions and express an intentional emotional state when called out. It is therefore implied that other humans will be able to perceive the intended emotion more easily when sound and/or interjections are used within a performance. Even though there were no deliberate sounds choreographed into the dance-based physical theatre performance in this study, the performers often made sounds as they were expressing emotions. This was allowed as the sounds were completely natural

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[113] Thus, through prosody in speech.
[114] This is due to each observer's personal uniqueness.

and not intended. It is, however, implied from previous scholarship discussed, that audience members may rely on voice and sounds that support emotion to perceive the emotion that is portrayed in the moment.

It is thus implied that the four behavioural clues or effector patterns, as proposed in this study, from which emotion can be perceived are: facial expressions; body expressions; breathing patterns; and vocal expressions. According to de Gelder (2006:242), "whole-body signals are automatically perceived and understood" by the audience. Nair (2007:24) suggests that there are three interactive levels of theatrical communication: sensory, artistic and symbolic. It is implied that the sensory level includes seeing, hearing and smelling; the artistic level involves the choreography and the execution thereof; and the symbolic level can be the representation of any themes, such as traffic sounds[115] or gestures.

This study specifically makes use of facial and body expressions, as well as breathing patterns to portray the three emotions of anger, fear and disgust during the performances. Vocal cues were not deliberately expressed by the dancers but rather allowed as an organic result of the aforementioned effector patterns. The following chapter will discuss the choreographic process and will further expand upon the involvement of music and sound. It is noted that all three: body, breath and facial expressions are able to convey and express emotion individually. In this study body, breath and facial expressions were combined to portray the three emotions. The process of embodying the three emotions using body, breath and facial expressions will also be discussed in the chapter to follow.

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[115] These sounds served to provide context, which in turn, provided a realistic anchor and an implied narrative.

CHAPTER FOUR: CHOREOGRAPHY

4. Introduction

This chapter provides the narrative of the performance, as well as a reflection on the process of choreographing it. To inform the choreographic process, it is necessary to acknowledge the movement and dance styles that influenced the development of the choreographic choices present in the performance. This includes my personal choreographic strategies stemming from Ballet and Contemporary dance styles that I draw from as a choreographer to delineate the intended emotions. As mentioned in chapter one, it is necessary to mention the impact these two dance styles have on my choreographic style in 'dance-based' physical theatre[116]. Roche (2011:107) states that "dance techniques imprint heavily on the body". Bradley (2009:65) suggests that no performer is completely neutral, no matter how much training the dancer has had. This statement implies that techniques that have been learnt over a lengthy duration of time, become part of the body's natural way of moving through time and space.

According to Gordon, in discussion with Finestone-Praeg (2010:32), technique forms part of expressions and gives a certain "ability, flexibility, knowledge about fall, balance, equilibrium, alignment...". However, Gordon [117] also acknowledges that some dancers/performers mentioned that technique took away from their expressivity and sense of 'individuality' in creating (Finestone-Praeg 2010:32). This aligns with the above stated regarding technique leaving an imprint on the body. I specifically refer to 'dance-based' physical theatre due to the influence ballet and contemporary dance has on my style of physical theatre and choreography, as mentioned in chapter one. Furthermore, both my undergraduate and Honour's physical theatre training was strongly dance orientated[118].

According to Amans (2008:70) dance is "practiced in many ways" and its movement language is used to express and communicate key values of either a specific style or a community. Dance, according to Bennet (2008:57), is not "intrinsically representational", implying that

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[116] As mentioned in Chapter One, the lines between performance studies, physical theatre and dance are blurred. For the purpose of this study, I refer to 'dance-based' physical theatre due to my 'dance' background and the imprint it left on my personally unique signature as performer and choreographer.

[117] According to Finestone-Praeg (2010:32), Gordon only engaged with technical dances classes after learning how to create and express through movement.

[118] By dance orientated, I mean that contemporary dance formed a major role in my postgraduate studies. It is, however, acknowledged that the range of discourses present in South African physical theatre (as discussed in chapter one) equally influenced my development as a choreographer.

dance makes use of the body's function which transforms into expression. Dale, Hyatt and Hollerman (2007:90) define dance as "consciously organised energy that gives form to feeling", implying that dancers can make conscious decisions about which moves to execute, and how to use the body to express emotions through dance [119]. Often the dancer's emotional expression is the cornerstone used by the choreographer to communicate a narrative.

Cohan (1989:710), similar to Fleishman (1997:201) (as discussed in chapter one), asserts that dance is a series of gestures that are integrated to make movement. Meaning, in dance, is extracted from gestures, therefore movements and meaning are aligned. As mentioned in chapter one, dance is ambiguous as it forms an image that does not consciously portray meaning. The meaning intended by the dancers is not necessarily the meaning perceived by the observers. Physical theatre makes use of gestures [120] in order to create a narrative that carries across specific themes, whilst incorporating the techniques of the dancers' personal backgrounds.

Ballet and Contemporary dance styles may influence the choreographic style of this specific choreography due to my background in these two dance styles. For the purpose of this study, it is crucial to determine whether an audience can recognise the intended emotion expressed by the dancers during the performance. In order to determine this, a performance portraying the three emotions the audience had to perceive and distinguish, had to be choreographed. The following sub-sections do not follow a linear process, but rather a logical trajectory to describe and discuss the various elements at play in what often is a non-linear and simultaneous emerging process. The elements involved in creating, choreographing/devising and embodying the emotions are discussed.

Firstly, the facilitation of the embodiment of the three emotions are discussed, as the whole performance was created with the purpose of portraying the three emotions as clearly as possible for the audience to perceive. The section below discusses the process followed in preparing the dancers to embody the three emotions.

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[119] This is not often the case with regard to dance and the portrayal of emotion, but through the use of the effector patterns along with the incorporation of the scholarly approaches of Laban Movement Studies and Lessac Kinesensics the quality of dance produced and executed by the dancer could be enhanced.
[120] Gesture is briefly discussed later in this chapter.

4.1 Facilitating the embodiment of the three emotions

Elements of Laban Movement Studies (LMS), Lessac Kinesensics (LK) were incorporated and used to facilitate the embodiment of the Effector Patterns (EP)[121] of the three emotions portrayed in the performance. LMS is used as a tool to describe basic human behaviour patterns (Luís & Jorge 2010:[sp]). LK encourages one to use "the simple but natural behaviours" of the body, which include breath, yawning and humming to release tension/strain and to influence behaviour (Lessac Training & Research Institute 2020). The EP stems from Alba Emoting (AE) and the work of Bond, which offers a system that allows one to express the emotions of fear, anger, joy, tenderness, sadness and sexuality/erotic love through the use of particular breathing patterns, followed by specific physical actions in the body and face (Bloch 2015:9). In using these approaches, I was able to construct a vocabulary that was easily understood by the dancers in terms of how they needed to embody the emotions which included where their body weight and orientation needed to be placed. Before the dancers could embody the emotions, it was vital to teach them how to de-role. The section below holds a discussion on how the de-roling process was initiated and incorporated within the rehearsal process, as well as before and after the performance.

4.1.1 De-roling before and after embodying an emotion

According to Corwin (2012:37) a performer needs to develop a "neutral body" in order to be able to step into or take on a role successfully. For the purpose of this study, it is noted that the term "neutral body" is problematic due to the ideologies and connotations attached to it.

There are however, studies that suggest that a sort of neutral body can come to exist, such as in the work of Cutlip (2001:57), when he states that the neutral body is a sacrifice that "takes place in the present". This perception possibly implies that there are moments of neutrality within one's own personal unique body. Bloch (2015:1613) explains that a neutral body is achieved when breathing calmly and regularly, while the facial expressions are as neutral as possible, with the eyesight being focused on a point on the distant horizon. The body is "erect" and the feet are planted solidly on the floor with the outer border of the feet in a parallel position,

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[121] When the term 'effector pattern' is used, I am drawing on the work of Bond (2017:[sp]) and Bloch (2015:[sp]) specifically. Bloch (2015) mainly refers to 'Effector Patterns' while Bond (2017) merely refers to 'Patterns' or 'Emotion Patterns'. Elements from both these authors were combined in embodying the EP relevant to this study.

hip width apart. The neutral pattern is a starting point for any emotional pattern to be embodied (Bloch 2015:1620).

A human congruent, neutral body does however, not exist due to all humans having their own lived experiences, and because all humans are personally unique. Corwin (2012:37) states that the body's holding patterns and alignment are due to the structure of each individual body and how that body has been "taught to move" by its 'caretakers'. This further relates to personal uniqueness and the individual's structural design[122]. Apart from being taught how to move, the individual moves according to the design of their body. The de-roling process considers both personal uniqueness and the individual's structural design, by allowing the performer to facilitate their own movements based on intent and optimal execution.

According to Arias (2019:4), the only viable method that "explicitly aims to aid actors when transitioning out of their role" is AE, a technique[123] developed by Susana Bloch. The de-roling was therefore based on Susana Bloch's seventh emotive pattern called 'step-out', which is used for the performer to return to a neutral[124] and non-emotional state (Bloch 2015:126). Bond also refers to similar EP as Bloch that are used to de-role, and refers to the de-roling as the "zero pattern" (Bond 2017:221). Arthur Lessac's Body NRG's (Neurological Regenerative Growth)[125] and Rudolf Laban's movement components: Body, Effort, Space and Shape (BESS) (Luís & Jorge 2010:[sp]) were also included in the process of de-roling. The information discussed below is a brief summary of how I facilitated the dancers' processes toward de-roling. The dancers were advised to de-role before embodying any of the effector patterns linked to the three emotions, as de-roling was also used as a warm-up and focusing mechanism.

Facilitating the dancers how to de-role was therefore a logical first step as my aim was for the dancers to feel safe, and to be able to navigate the embodiment of the emotions. If at any point in the process the dancers felt overwhelmed by the emotion they were embodying, they could

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[122] All humans are object and subject simultaneously (Steyn & Munro 2015:7).
[123] This technique is about manifesting emotions and is applied in acting.
[124] It is acknowledged that this is a contestable term as there is no such thing as a neutral body due to lived experiences inscribed on the body, but in this context it is applicable.
[125] The body NRG's consist of Buoyancy, Potency and Radiancy - these three body NRG's are discussed later in this section.

de-role [126]. Arias (2019:4) states that de-roling assists performers who have "difficulty differentiating themselves from their character, or allowing traits of a character to cross over into their life". The information below[127] was drawn from Bloch's (2015:123-127) effector patterns, Arthur Lessac's (2014:11-13) vocabulary based on the body NRG's, and Rudolf Laban's movement components, especially the four Effort[128] factors (Bardley 2009:32) as mentioned above.

De-roling entailed the following: a calm and regular breathing pattern, a body that is in optimal alignment, and a face that is as neutral as possible. Drawing on LMS, LK and AE, neutral breathing was facilitated. The use of pleasure smelling, which forms part of Lessac's vocabulary, was incorporated. Pleasure smelling draws from one's own lived experience in choosing a scent "which is pleasurable", focusing on the smell of the fragrance while enjoying the "sensations which arise from that experience" (Munro, Kinghorn, Kur, Aronson, Krebs & Turner 2017:98).

The breath has to be free in Flow, which forms part of Laban's vocabulary explaining the "continual releasing of the flow of movement" (Bradley 2009:75). Breathing in through the nose and exhaling through the mouth as if blowing out a candle and keeping "the inhalations and exhalations equal in time" draws on Bloch's (2015:124) work. While executing this breathing pattern the following needs to happen in the body: the feet must be placed parallel, hip distance apart[129], finding centre through rising tall, as if a helium balloon is attached to the crown of the head (Bloch 2015:124). The performer should be aware of the three-point weight distribution in the feet, while focusing on not locking knees and keeping the knees in line with the toes. Shifting the focus releases the tension in the neck and shoulders, with the hands comfortably hanging at the side of the body. Getting the body into dynamic alignment/integration, forms part of Arthur Lessac's terminology, which implies "that the body is optimally integrated in relation to and in itself, within its own physical construct, but at the same time the body is

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[126] It is implied that de-roling forms part of holistic health. This is based on the concept that the performers "accept responsibility for their own level of well-being, and make choices…to take charge of their own health" in being able to know when they need to step away from a certain emotion (Stemple 2005:132).

[127] The three physiological aspects that are involved when embodying an emotion and when de-roling are: Breathing Pattern; Body Expression; and Facial Traits.

[128] Describes how the body moves (Bradley 2009:67). The Effort Factors include: Flow, Weight, Time, and Space. The Effort Factors are explained in detail in Appendix A.

[129] From a Laban perspective, this provides more stability than mobility. Sit-bone distance apart will provide equal stability/mobility (Wahl 2019:25).

dynamically engaged with the environment. Dynamic alignment thus indicates an awareness of oneself in action" (Munro 2017:21).

Dynamic alignment also forms part of Laban's work, and is suggested as the most basic aspect of movement (Wahl 2019:32). According to Studd and Cox (2013:45), dynamic alignment "is the awareness of the ongoing relationship among our parts as we move through the world". Dynamic, refers to the constant process of change that takes place in the body, and alignment refers to the pattern the body parts form in relation to one another (Studd & Cox 2013:45).

With regard to the face, facial tension has to be released while keeping the eyes open and with a soft focus on the horizon (Bloch 2015:124). In light of the above, it is implied that the purpose of a neutral dynamic alignment[130] is to assist the performer to express how they are feeling, who they truly are, and what they value (Adrian 2008:65). It is suggested that a neutral body serves to navigate a process of mindfulness and well-being for the performer. Therefore, dynamic alignment allows a performer to portray that they are present, have stamina, are a balanced individual, and ready to transform (Adrian 2008:65).

Through de-roling the performers would develop and find their dynamic alignment while presenting their lived experience. The following provides example guidelines that I used when facilitating the de-roling process in the rehearsals[131]:

• Walk around the room, become aware of the surrounding sounds;
• Shift your focus to your body: how are you using your feet; what is your pace; what is your breath doing; how are you moving your arms; focus on your head neck relationship and release the tension; are you leading with a certain body part; become aware of any tension in the body and try to breathe into it to find release;
• Shift your focus to your pleasure smell[132];

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[130] According to Adrian (2008:65), "your dynamic alignment is the shape your body assumes when you are your best self on a very good day" and not a description for "perfect posture".
[131] These guidelines are my own map which was constructed from scholarly discourse that I have been exposed to during my undergraduate degree, as well as my Honours degree. These guidelines are also based on the Principles of Bartenieff Fundamentals (Hackney 2002:41). These principles are listed and defined in Appendix A.
[132] Pleasure smelling forms part of Lessac's vocabulary. Pleasure smelling involves drawing on a familiar event, which is "pleasurable, graceful, and efficient" and "they are a healthy use of the body" (Lessac & Kinghorn 2014:11). Familiar events stem from "instinctive, intuitive behaviour that is still as natural and spontaneous as when you were a small child and therefore never subjected to habit-patterned, non-thinking, conditioned functioning" (Lessac 1997:6).

- When you are ready, bring the walking to a close and stand with your feet parallel, hip distance apart;
- Engage in muscle floating[133] to find your centre, gently shifting your weight so that you find the three-point weight distribution[134];
- Start engaging in a gentle muscle shake[135] to release any unnecessary tension;
- Moving into a muscle yawn[136] to allow every cell of your body to engage with breath[137], moving oxygen through the entire body;
- Gently engage in muscle floating[138] to find your centre of gravity once again;
- Open your eyes, and focus on a spot on the horizon, still being aware of the environment around you (soft focus[139]);
- Focus on your pleasure smell and on optimally aligning your body in a vertical orientation;
- When you are ready, focus on inhaling through your nose while crossing/interlocking the fingers slowly, breathing in as you lift the arms over your head[140];
- As your arms reach the top out your head, gently squeeze the hands together while exhaling and dropping the hands over the head to the back of the neck;
- Allow a deep and thorough exhalation[141], then release and repeat the process three times at your own pace;
- Remember to engage in your pleasure smell - inhale through the nose, and exhale through the mouth as if blowing out a candle;

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[133] Muscle floating is part of Lessac's Body NRG's, also known as Buoyancy. The Body NRG's will be discussed later in this chapter.

[134] Forms part of Lessac's vocabulary stating that there is weight on both heels, as well as the two points of the soles of the feet: under the big toe and nearing the pinky toe (Lessac 1997:31-32).

[135] Forms part of Lessac's vocabulary that forms part of relaxer-energisers (muscle shaking, muscle yawning and muscle floating forms part of Lessac's relaxer-energisers). Muscle shaking or vibrating the muscles "is a wonderfully therapeutic way to relax them and simultaneously loosen and free the joints" (Lessac 1997:53).

[136] Forms part of Lessac's vocabulary. According to Lessac (1997:51), "muscle yawning vitalizes the muscles by eliminating muscle-cell waste matter; it serves both part of gestalt functioning and as part of synergy".

[137] Hackney (2002:55) refers to "cellular breathing" and that it forms the building block of human life processes as breath "influences every aspect of movement".

[138] Forms part of Lessac's vocabulary. This involves "total body relaxation filled with gentle stimulation - an experience of muscles in action without the slightest awareness of muscle effort or muscle use" (Lessac 1997:52).

[139] Soft focus forms part of *Viewpoints*, which belong "to the natural principles of movement, time and space" (Bogart & Landau 2005:7). Furthermore, viewpoints is "a philosophy translated into a technique for (1) training performers; (2) building ensemble; and (3) creating movement for the stage" (Bogart & Landau 2005:7). Viewpoints is also points of "awareness that a performer or creator makes use of while working" (Bogart & Landau 2005:8). Soft focus specifically relates to the viewpoint of Tempo, as the focus is on how "fast or slow the action is performed", and through the use of soft focus (peripheral vision) performers are able to move in unison more efficiently (Bogart & Landau 2005:37-38).

[140] Draws on Susana Bloch's seventh effector pattern, called 'step-out' (Bloch 2015:125-128).

[141] Drawing on Lessac's (2019:45) Buoyancy, the inhaling and exhaling should feel gentle, like a satisfying sigh reflecting on the feeling of appreciation and wistfulness.

- Focusing on the inner-outer environment[142];
- Once you have repeated the abovementioned three to four times, start massaging the boney landmarks of the face, starting in the centre of the face;
- Keep engaging in your pleasure smell, pleasure smell in, and pleasure sigh out, keeping the eyes open;
- Massaging the scalp, down the neck and into the shoulders;
- Gentle muscle shake while stepping into a contralateral over to roll down the spin, while keeping the eyes open; repeat this on the other side;
- Once your spinal roll-downs are complete, start muscle shaking and doing some horse lips (also known as lip trills[143]);
- After the muscle shake subsides, rub or shake off any negative energy and become aware of the surroundings in the room;
- Heel-Rocking[144] is encouraged, if you still need to let go of any trace of an emotion[145].

After experiencing the de-roling process for the first time, the dancers wrote down their experience of the process, as well as their thoughts on the concept of the performance. What they shared with me, gave me insight into to what the dancers were expecting and experiencing, and how I could have possibly created a safer space for them. The first rehearsal went smoother than I initially expected. The dancers were fully committed to the process and they seemed excited to explore. I observed that all three dancers seemed calmer, centred, aware and energised after de-roling. The de-roling assisted the dancers to get out of their mind and into their body[146]. The dancers seemed to enjoy the de-roling process and got the step-

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[142] Inner-outer environment forms a golden thread in Lessac Kinesensics and "posits a continuous awareness of a fluid interaction between the self and the environment" (Munro, Turner & Munro 2017:10). Laban's work suggests that "inner beliefs and outer behaviours manifest in expressive movement that is deeply meaningful" (Bradley 2009:33). In essence, inner tension is often expressed outwardly, therefore the performers have to be actively aware of their inner environment and how the outer environment is affecting the inner state of being.

[143] Lip trills are also use to free the speaking voice (Titze 2006:449). The vibrations of the lip trills can possibly release habitual tensions in the tongue, lips, and jaw, as well as the face (Nix & Simpson 2008:340).

[144] This exercise can be done standing or lying on the floor. To execute the exercise, one has to flex and extend the "ankle joint in a rocking rhythm; allow the flow of the rhythm and the rocking to sequence into the knee joints, the hips and pelvis, along the spine, and into the point at which the spine enters the skull" (Bradley 2009:70).

[145] The Heel-Rock forms part of the Bartenieff Fundamentals and is "used to both identify and relieve tension" with the goal being to allow the body to release "into a full rocking and sequencing, opening the breath, releasing the shoulders and rib cage, and connecting up the vertical architecture of the body" (Bradley 2009:70). All three dancers were exposed to and taught how to do heel-rocking before they started the rehearsal process. This formed part of the undergraduate Drama curriculum at the University of Pretoria.

[146] This links to the foundation of Lessac's work, which he calls "body wisdom". Body wisdom is about trusting the senses of the body, rather than the intellect, to give one accurate information (Hurt 2014:20&21). Lessac also refers to the "teacher within" which is the ability to be aware of the well-being of the self and others within the

by-step routine of the de-roling process easily. It appeared as though the dancers were shocked at how easy the de-roling process was. They struggled to keep their eyes open; therefore, I had to remind them that keeping the eyes open allows one's awareness to be in the outer and inner environment simultaneously.

I observed that all three dancers felt that they could benefit from the process of de-roling and embodying the emotions. One of the dancers appeared frustrated before the de-roling process, but after de-roling they seemed calm. It was further observed that the dancers did not feel any strong emotions; nevertheless, they were not without emotion either. They appeared ready and able to access any emotion.

I realised that the de-roling process was effective and assisted the dancers on many internal and external levels. Adrian (2008:65) describes the neutral dynamic alignment as being connected to your breath, allowing your presence to radiate and for the observers to witness your vital essence. Therefore, by making de-roling a vital part of the warm-up routine, the dancers were able to get into their neutral dynamic alignment, which in turn assisted them with the readiness to embody the emotions. Apart from developing a neutral dynamic alignment, de-roling also assisted the dancers with balancing their inner and outer environment, which is the "continuous awareness of a fluid interaction between the self and the environment" (Munro *et al*. 2017:10). Being in a neutral state also allowed the dancers to be more creative and open-minded when choreographing.

The body NRG's[147] were used to assist with the de-roling process due to their ability to access familiar events, which contribute to well-being. The NRG's were further used in assisting the dancers with the emoting process, which is discussed in the section below.

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rehearsal and performance space. This implies that performers will know when to de-role and how to adjust their performance in order avoid self -harm.

[147] The term NRG stems from energy, which according to Lessac and Kinghorn (2014:33) is the "capacity to cause or to do work" Furthermore, energy "cannot be created or destroyed; it can only be transformed from one form into another" (2014:33). The definition and description of body NRG's and how the three pain-relievers and relaxer-energisers form the basis for the body NRG's are further discussed in the section below.

4.1.2 Facilitating the process of embodying the three emotions through the use of 'three strategies'[148]

As mentioned previously, I made use of three discourses to facilitate the de-roling process (EP, LMS, LK). I used the same three discourses to facilitate the embodiment of the three different emotions. As the facilitation process only draws on, but involves more than just the use of effector patterns, the process will be referred to as the embodiment of the emotions through the use of 'three strategies'. The strategies are further discussed in the sections that follow.

4.1.2.1 Expanding on the discourses used to facilitate the effector patterns: LMS
4.1.2.1.1 LMS: Effort Factors and Elements

I specifically used terminology from Laban's Effort Factors, which describe the dynamic and quality of the movements (Studd & Cox 2013:137). The Effort category is "about the energetic aspect of human movement", which suggests that Effort is "present in all areas of … life" (Wahl 2019:92-92). Effort tells us "how" movement is executed and therefore describes the "feel, texture, tone, or colour of the movement and illuminate the mover's attitude, inner intent, and how they exert and organise their energy" (Studd & Cox 2013:137). There are four Effort Factors: Flow; Weight; Time; and Space.

Flow "describes the ongoingness of movement" (Bradley 2009:75; Studd & Cox 2013:137). According to Wahl (2019:94), Flow is the "baseline of movement" as it is about the quality of investment in the continuity of movement, which is the "inner attitude toward ongoingness". Flow also refers to the muscular tension in making movement flow by describing how fluid the movements were executed (Fernandes 2015:146).

Weight describes how the individual uses their body strength and power toward overcoming gravity (Bradley 2009:75). Weight is also described by Wahl (2019:95) as the quality of how body mass is used and invested in "relationship to gravity, and how this is manifested in movement". Time is described as the change in "attitude towards time" (Bradley 2009:75) and how the quality of the performers' instincts and impulses regarding time manifest in movement behaviour (Wahl 2019:97). According to Bradley (2009:75), Space can be "single or multi-

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[148] The term 'three strategies' refers to the three approaches that were combined in order to embody the emotions, which include EP, LMS and LK.

focused", which is further explained by Wahl (2019:97) as one's ability to perceive and pay attention to the environment and how movement is affected by the environment. Wahl (2019:97) further states that Space is about "inner attitude manifested outwardly" toward the focus of the individual's attention.

Within these Effort Factors are Effort Elements, which "are polarities of each other and lie on opposite ends of a spectrum" - each revealing a different "quality of energetic expression" (Wahl 2019:93). The Effort Elements of the Effort Factors are as follows: Flow - free or bound; Weight - light or strong; Time - sustained or quick; and Space - indirect or direct (Wahl 2019:93).

4.1.2.1.1.1 Flow: Free or/to Bound

According to Bradley (2009:75), free flow is the "continual releasing of flow of movement". Fernandes (2015:147) suggests that free flow is "coherent to a somatic approach of the bodymind [149] integration" as it includes moving without interruption or moving with an uncontrollable flow, or continuously moving. On the opposing spectrum, bound flow is the ability to stop movement at any moment (Bradley 2009:75). Bound flow, according to Fernandes (2015:147), involves movement that is more controlled or controllable; restricted and careful.

4.1.2.1.1.2 Weight: Light or/to Strong

Light weight is "rarified, buoyant surmounting of gravity" (Bradley 2009:75). According to Fernandes (2015:155), light weight "brings the sensation of lightness, with words such as graceful, light, and wind". Furthermore, light weight is suggested as moving against gravity and feeling as if there is a lightness in the cells of the body (Fernandes 2015:156). However, strong weight gives the ability to overcome an obstacle and pushing a heavy object across the floor (Bradley 2009:75). Strong weight evokes strength and is constructed to be powerful and rhythmical as if anchoring to the ground (Fernandes 2015:157).

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[149] The concept of "bodymind" is expanded in section 4.2.1 later in this chapter.

4.1.2.1.1.3 Time: Sustained or/to Quick

Sustained time is explained as "a lingering in time" (Bradley 2009:75). Therefore, it suggests that there is no "hurry to advance" and that there seems to be a deceleration, as if time is getting slower and slower (Fernandes 2015:159). Quick time on the other hand, is an acceleration and "a hasting of time" (Bradley 2009:75). Quick time is urgent and advances toward the stimuli and suggests that there is a clear urgency and a growing speed. Furthermore, there is a sense of immediacy that triggers quick movements (Fernandes 2015:160).

4.1.2.1.1.4 Space: Direct or/to Indirect

With regard to indirect space, the focus of the performer is described as flexible and "multi-focused", as mentioned previously (Bradley 2009:75). Fernandes (2015:151-152) suggests that indirect focus "can be associated to an antenna, open to all information" and leads to one being attentive to all the surrounding space, whereas direct space is "associated with an arrow, channeled to a focus" as if "zooming in to each object and person". According to Bradley (2009:75), direct space occurs when the performer is focused on a single point in space and/or moving directly toward it.

The following section will expand the LMS Shape category.

4.1.2.1.2 LMS: Shape category

I also made use of Laban's Shape category in facilitating the dancers' emoting process. Shape is known as the "form and forming processes of the body" that provides "information about movements" (Wahl 2019:114). Shape therefore addresses the changing form of the mover and how the "mover relates to themselves and/or their environment" (Studd & Cox 2013:147). According to Bradley (2009:87), Shape is about "how the body changes shape in relationship with others", and "others" can be movers, space, emotion, or objects. There are five aspects of the Shape category, namely: Opening and Closing; Shape Flow Support; Shape Qualities; Modes of Shape Change; and Shape Forms (Wahl 2019:114). However, in this study only Shape Flow Support and Shape Qualities were incorporated.

Shape Flow Support describes the "internal postural support for form change", which is important for the dancers' mental imagery with regard to the forming of inner feelings and of inner "motility of the body's changing form" (Wahl 2019:115-117). According to Wahl (2019:115), the "most basic way to describe shape flow support is in terms of growing and shrinking", often linked to the movement of the torso during the breathing process. Shape Flow Support can, however, be linked to smaller units which include: Lengthening/shortening in the vertical dimension; Widening/narrowing in the horizontal dimension; and Bulging/hollowing in the sagittal dimension (Wahl 2019:116). In describing the body orientation and expression of the three emotions, the vertical and horizontal dimension of Shape Flow Support were mostly used[150].

Moving to Shape Qualities refer to the changing forms of the movers to themselves and their environment (Studd & Cox 2013:147-148). Furthermore, Shape Qualities address "the question of toward where a form is moving", through evoking the sense "of the body morphing toward something" (Wahl 2019:118). According to Hackney (2002:242), Shape Qualities "give information about the attitudinal process of changing the shape of the body". There are six Shape Qualities: Rising - moving toward up-ness; Sinking - moving toward down-ness; Spreading - moving toward and opening to side-ness; Enclosing - moving toward and closing to side-ness; Advancing - moving toward forward-ness; and Retreating - moving toward back-ness (Wahl 2019:119; Hackney 2002:242-243). The Shape Qualities are therefore useful in situations "where clarity of form change matters", which is why these qualities were used in facilitating the embodiment of the emotions (Wahl 2019:121). Shape Qualities also provide "emotional meaning for each individual" as they allow the performer to connect internally to "enjoy the forming process" (Hackney 2002:243).

Along with the work of Laban's Effort and Shape Factors, I also incorporated Lessac's body NRG's as a means of assisting with the different tensions in the body, as a result of the emotion that is embodied.

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[150] The exact description of where and how Shape flow support was incorporated in the process is discussed in the three tables that are discussed in section 4.1.2.3.

4.1.2.2 Expanding on the discourses used to facilitate the effector patterns: LK
4.1.2.2.1 LK: Body NGR's

I facilitated choreographic explorations with the three body NRG's: Buoyancy, Radiancy and Potency (Lessac & Kinghorn 2014:36; Lessac 2019:34). According to Lessac and Kinghorn (2014:33), energy can be transformed, but it cannot be created or destroyed; further stating that "energy is the capacity to cause change or to do work". The NRG's therefore reflect "the quality or the primary characteristic of the body's kinetic energy" (Lessac & Kinghorn 2014:34).

These body NRG's also assisted in the de-roling process as they came in handy when the dancers had to become aware of their inner sensations, drawing on their familiar events. The pain-relievers and relaxer-energisers become the "familiar events to recognise these NRG's" (Lessac & Kinghorn 2014:36). Pain-relievers are actions organically executed by the body to "overcome discomfort and pain" (Munro 2017:17). Three primary pain-relievers include stretching, shaking, and releasing "without giving into gravity" (Munro 2017:17). Relaxer-energisers are defined as actions that "simultaneously relax, relieve stress, and release a sense of energy, creating an energetic experience" (Munro 2017:17). In addition to "muscle yawn, shake and float," other examples of relaxer-energisers include "humming, sighing, smiling, dancing and laughing" (Munro 2017:17; Lessac & Kinghorn 2014:24).

Both pain-relievers and relaxer-energisers rely on muscle shaking, muscle yawning, and muscle floating. For instance, through the release of "Muscle Yawning", which is the familiar event that evolves into the organic instruction of potency (Lessac & Kinghorn 2014:48), there is a release in the muscles and joints; movement becomes easier; body alignment improves; breathing becomes deeper and more natural; organ function improves; and energy and vitality increase (Lessac & Kinghorn 2014:6). The body NRG's are expanded upon and discussed below (Lessac & Kinghorn 2014:36-52; Munro 2017:16-19; Lessac 1997:51-53; Lessac 2019:34):

- Buoyancy[151] is an organic instruction that evolves from the familiar event of floating and being weightless; getting a sense of overcoming gravity; feeling as though one is charged with

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[151] There are three distinct variations in Buoyancy, and they are: rising buoyancy, floating buoyancy, and settling-down buoyancy (Lessac 2019: 34). Rising buoyancy is the "feel of floating up like the expanding dough of yeast

oxygen and feeling effortless, giving the perception that movement is weightless and non-fatiguing, similar to moving in air or water.

- Radiancy[152] is an organic instruction that evolves from the familiar event of shaking; being charged with electricity, giving the feeling of 'lighting up'; and inner and outer excitement that is impulse-charged.

- Potency[153] is an organic instruction that evolves from the familiar event of yawning; being chemically charged promising powerful action; allows for physical actions to be performed without strain or force, creating optimal efficiency using breath.

As indicated previously, various approaches and strategies were used in order to facilitate the de-roling process, as well as the embodiment of the three emotions[154]. The section below will expand on the approaches and how they were used to embody the effector patterns.

4.1.2.3 Effector Patterns and how the discourses were integrated

When the dancers embodied fear, for instance, I combined the various approaches and drew from their concepts and terms[155], such as narrow/enclose, potent, indirect, and sudden. When the dancers embodied anger, I used words such as advance, direct, sudden, and spread/widen. When they embodied disgust, I used words such as retreat, rise upwards and away, and sustain. The term "potent" derives from Lessac's terminology; the other terms mentioned above derive from Laban's Shape descriptors.

Below I provide three tables that discuss the effector patterns of each of the three emotions. The elements found in the three discourses are incorporated into the tables as they pertained to the rehearsal process. AE mainly informed the three physiological aspects required to trigger the effector patterns, whereas LK and LMS contributed to the terminology to facilitate the

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bread"; floating buoyancy is "just level floating like a feather wafting in the windless air"; and swelling-down buoyancy is like "floating down and reaching the surface, feeling as weightless as an air-filled balloon" (Lessac 2019:34).

[152] Radiancy energy "induces the feeling of spontaneity" (Lessac 2019:34).

[153] Potency is flexible and can be used to sustain extension (Lessac 2019:34).

[154] It is acknowledged that the term 'effector patterns' derived from the work of Bloch (Alba Emoting), but for the purpose of this study the effector patterns were combined with the LMS and LK approaches. Therefore, it is seen that there are three strategies that were used for the embodiment of the emotions and the de-rolling process, that of: EP, LMS, and LK.

[155] These are general terms I used when facilitating the body orientation and expression of the dancers. Please refer to the tables below for the discussion on the three strategies and the four expressive domains.

breathing patterns, body expressions and facial traits[156]. The effector patterns were described using the findings of Bloch's laboratory studies, as well as other theorists who followed and built on Bloch's initial technique. They are: Dal Vera (2001), Baker (2008) and Bond (2017).

With reference to the information presented in the tables, it is observed that all three emotions share similar behavioural patterns and/or physical manifestations. The slight changes in movement quality is what manifests the emotions, different in both experience and expression. The dancers often struggled to embody one emotion at a time, but through the use of specific terms, such as retreat and rise, for instance, the dancers were able to fully embody one emotion without getting confused with the other emotion's patterns. It is therefore implied that intertwining the three approaches, EP, LMS, as well as LK had a major impact on the embodying of the three emotions in the choreography and in the performance thereof.

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[156] Refer to Appendix A to understand the Effort Factors and the Shape Qualities referred to in the tables below.

Table 4.1: Effector Patterns for Anger

ANGER	Effector Patterns		
	Breathing Pattern	**Body Attitude & Expression**	**Facial Traits & Expression**
Effector Patterns (Bloch 2015:102-107; Dal Vera 2001:55; Baker 2008:22; Bond 2017:222-223)	The inhalations and exhalations are large. Breathing should be channelled through the nose. The breaths should be sharp. Although sharp, the inhalation and exhalation lengths should remain equal to each other.	The general tone of the body is tense, with abrupt and fast movements in a forward directional attitude. An increased tone in the anti-gravitational extensor muscles due to the related posture of attack. The body is tense and forward, ready to attack. The forward orientation is achieved by moving the torso forward and then lifting it up slightly. The arms and hands also move forwards with the face pressing directly forward as well.	The eyes are semi-closed with tensed eyelids; the forehead is vertically wrinkled; the eyebrows[157] are frowning with a focused gaze; the mouth and jaw are clenched. The facial muscles are tense with the lips pressed together. The nostrils are flared. The muscles on the outside of the eyes and along the nasal ridge adduct; the muscles inside the nostrils constrict, with tension under the eyes; the lower lid is trying to cover the eye.

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[157] Although the movement of the eyebrows are discussed and published in various scholarly articles and books, such as Bloch (2015:107); some trainers of EP such as Bond (2017:222), have moved away from either adding or raising the eyebrows as there might be a tendency to inspire other emotions such as sadness/crying. The eyebrows involve delicate micro-movements that can easily be confused between other patterns.

ANGER	Effector Patterns		
	Breathing Pattern	**Body Attitude & Expression**	**Facial Traits & Expression**
Lessac Kinesensics (Lessac & Kinghorn 2014:33-50; Munro 2017:19; Lessac 2019:34)	Making use of Lessac's Potent body NRG, the dancers were able to sustain the deep Quick breaths that assisted with the embodiment of the emotion as Potency is associated with yawn freedom.	Making use of Lessac's Potent and Potent body NRGs assisted the dancers in their ability to sustain the constant muscular tension in the body. The Radiant NRG assisted with vibrations felt in the body due to the emotion. Potency assisted with the physical strength and power, as potency carries a feeling of high-voltage.	Making use of Lessac's Radiant Potent body NRG assisted the dancers in keeping the tension in the facial muscles, as well as narrowing the eyes[158] and clenching the jaw. Potency was used to get the face and focus into a state of fierce and deep intensity.
Laban Movement Studies (Bradley 2009:32; Hackney 2002:239-243; Wahl 2019:93-97 & 115-120; Studd & Cox 2013:137-138&147-148)	Making use of Laban's Effort Factor of Time and its Quick element, I could explain the tempo of breath through the nose. Another word that can be used is 'urgent', the term used to describe 'quick'.	Using Laban's Effort Factor of Flow, I was able to facilitate the progression of the movement as Bound, which is one of the elements of Flow. The Weight, another Effort Factor, was explained as Strong and Forceful.	The Effort Factor of Space was used to explain how the dancers' attention had to be channelled Directly. Their vision had to be channelled into one spot.

[158] The facial muscles, specifically on the outside of the eyes and on either side of the bridge of the nose and mouth, contract inward toward the centre of the face. The eyes are pulled back into the head by the contraction of the muscle behind the eyes, while the lower eyelids rise.

ANGER	Breathing Pattern	Effector Patterns	
		Body Attitude & Expression	Facial Traits & Expression
		When the dancers executed movements while they embodied anger, I could easily direct them to make the movement stronger.	Laban's Shape quality - narrow was used to describe the tension in the eyes and the eyebrows.
		Making use of Laban's Shape Qualities, I was able to guide the dancer in how they relate to themselves and their environments. I mostly made use of the advancing and spreading shape qualities when guiding this emotion.	
		Advancing was used to inform the dancer to take on a forward body orientation.	
		Spreading allowed the dancers to ground themselves in order to seem more intimidating.	
		Owing to the use of the Shape qualities, the movements of the dancers became bigger and more explosive.	

It is observed from the information provided in Table 4.1, that there are particular patterns that have to be executed in the way one breathes, orientates the body, and integrates certain facial traits when embodying and facilitating anger. The LMS and LK approaches greatly assist in how the effector patters are executed and sustained. As previously discussed, the EP combined with the LMS and LK approaches are referred to as the 'three strategies' used to embody the emotions. Furthermore, a body of accepted scholarly discourse was integrated to facilitate the emotion of anger.

The general vocabulary generated from the three strategies used when facilitating the breathing pattern for anger, was as follows: nasal breathing; sharp, quick and direct; and Potent body NRG.

The general vocabulary generated from the three strategies used when facilitating the body expression and orientation for anger was as follows: tense muscle tone; bound, direct, quick and strong movements; advancing and widening stance/orientation; and Radiant and Potent body NRG's.

The general vocabulary generated from the three strategies used when facilitating the facial traits for anger were as follows: tense facial muscles and clenched jaw; direct focus; narrow eyes; and Potent and Radiant body NRG's.

Table 4.2: Effector Patterns for Fear

FEAR	Effector Patterns		
	Breathing Pattern	**Body Attitude & Expression**	**Facial Traits & Expression**
Effector Patterns (Bloch 2015:102-107; Dal Vera 2001:55; Baker 2008:22; Bond 2017:224)	Breathing is irregular with large inhalations.	The general tone of the body is tense with abrupt and fast movements.	The eyes are wide open; the forehead is wrinkled horizontally with tensed and raised eyebrows[159].
	Sharp shallow breaths through the mouth.	The directional attitude is backwards with the head retracting from the body axis.	The gaze is unfocused and moving around as if searching for something; the mouth is tensed and opened vertically.
	Breaths can appear slow and shallow almost 'sigh-like', with passive incomplete exhalations.	The body withdraws due to the increased muscular tone that mainly affects the anti-gravitational muscular groups, especially the muscles involved in extending the neck.	The mouth and eyes are opened wide.
	Shallow breathing is created by shortening the lengths of the inhalations and exhalations, and occasionally adding a fairly long hold after the inhalation.	The body is tensed while inclining slightly backward.	The eyes are active and dart around the room, while the head remains still and the body faces the focal point.
	The breathing should be activated in the high chest.	The upper back moves backward and lifts up, while the other muscles which follow, reflect the backward retreating action.	......*continued on next page*

159 As mentioned previously with regards to anger, the movement of the eyebrows are included in various scholarship. Some authors and trainers have, however, moved away from including the movement of the eyebrows as the micro-movements of muscles in between the eyebrows can be easily confused between emotive patterns. The pattern of sadness/crying, for instance, may be inspired by the movement of the eyebrows. As mentioned previously, Bond (2017) is one of the scholars who do not include the movement of the eyebrows in her book.

FEAR	Effector Patterns		
	Breathing Pattern	**Body Attitude & Expression**	**Facial Traits & Expression**
Lessac Kinesensics (Lessac & Kinghorn 2014:33-50; Munro 2017:19; Lessac 2019:34)	Making use of Lessac's Radiant body NRG, the dancers were able to get the shakiness in the breath which assisted with the embodiment of the emotion. The Potent body NRG was used to sustain the irregular breaths, especially in the 'sigh-like' phases.	Making use of Lessac's Radiant and Potent body NRG's assisted the dancers' ability to sustain the constant muscular tension in the body. The Buoyant body NRG could possibly assist in the lightness that is needed in escaping, and in the upward lifts in the back.	The Potent body NRG mostly assisted in sustaining the facial tension. Radiant body NRG was incorporated into the indirect gaze when searching for danger.

FEAR	Effector Patterns		
	Breathing Pattern	Body Attitude & Expression	Facial Traits & Expression
Laban Movement Studies (Bradley 2009:32; Hackney 2002:239-243; Wahl 2019:93-97 & 115-120; Studd & Cox 2013:137-138 &147-148)	The main focus is on the Effort Factor of Time and the use of both elements involved with Time, as inhaling is deep and Sustained, where the exhales tend to be Quick at times. Breathing patterns for fear are irregular, therefore making use of both the time elements made it easier for the dancers to understand.	Using Laban's Effort Factor of Flow, I was able to facilitate the progression of the movement as Bound, which is one of the elements of Flow. The Weight, another Effort Factor, was explained as Strong. When the dancers executed movements while they embodied fear, I could easily facilitate them to make the movement strong and sharp as if pulling away from that which they were afraid of. Making use of Laban's Shape Qualities, I was able to guide the dancers in how they related to themselves and their environments. I mostly made use of the Enclosing and sinking shape qualities when guiding this emotion.	The Effort Factor of Space was used to explain how the dancers' attention had to be channelled. When embodying fear, one has to be very aware of everything around you; therefore, the vision becomes Indirect. The dancers' heads would sometimes jerk as they would be fearful of something in a different direction. The head jerks also fitted in with the Quick element present in the Time Effort Factor.

FEAR	Effector Patterns		
	Breathing Pattern	Body Attitude & Expression	Facial Traits & Expression
		Enclosing was used to inform the dancer to narrow their shoulders and Sink into a smaller position in order to hide. These qualities allowed the dancers to be more compact, making their movements quick, bound and small.	

It can be deduced from the information provided in Table 4.2, that there are particular patterns that have to be executed in the way one breathes, orientates the body, and integrates certain facial traits when embodying and facilitating fear. It is also observed that the LMS and LK approaches greatly assist in how the effector patters are executed and sustained. As previously discussed, the EP combined with the LMS and LK approaches are referred to as the 'three strategies' used to embody the emotions. It is evident that there is a body of scholarly discourse that was integrated to facilitate the emotion of fear.

The general vocabulary generated from the three strategies used when facilitating the breathing pattern for fear was as follows: mouth breathing, sharp in and sigh-like out; indirect; and Potent and Radiant body NRG's.

The general vocabulary generated from the three strategies used when facilitating the body expression and orientation for fear was as follows: tense muscle tone; bound, sharp and strong movements; narrowing and enclosing the body; and Potent and Radiant body NRG's.

The general vocabulary generated from the three strategies used when facilitating the facial traits for fear were as follow: widen the eyes and mouth; indirect gaze, sharp head movements; and Potent and Radiant NRG's.

Table 4.3: Effector Patterns for Disgust

DISGUST	Effector Patterns		
	Breathing Pattern	**Body Attitude & Expression**	**Facial Traits & Expression**
Effector Patterns

As mentioned in section 2.5.3 in chapter two, disgust does not form part of Bloch's basic six emotions, therefore the effector patterns were constructed using scholarly research.

It is acknowledged that there are many theorists who regard Disgust as a primary emotion, as mentioned in chapter two.

(Haidt 1993:[sp]; de Melo, Kenny & Gratch 2010:227; Curtis & Biran 2001:18; Gunes & Piccardi 2007:4; Haidt et al. 1997:111) | Breaths are shallow and stop at times.

There are inspiration pauses to suppress nausea.

Breaths are suspended and mostly take place through the nose. | The head turns or jerks away from the stimuli and could possibly shake slightly.

The body and head retreat upward, while the shoulders narrow slightly.

Hands could possibly cover the face while the body moves backward. | The cheeks are raised while the upper lip curls upwards. The corners of the lip draw down and back.

The nostrils flare, while the nose draws up slightly.

The brows[160] are lowered inward and the tongue could possibly stick out.

The eyes naturally narrow and close at times, due to the raised cheeks and the lowered eyebrows. |
| | | | ......continued on next page |

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[160] Refer to the previous footnotes regarding the movement of the eyebrows on page 89 and 92.

DISGUST	Breathing Pattern	Effector Patterns	
		Body Attitude & Expression	Facial Traits & Expression
Lessac Kinesensics (Lessac & Kinghorn 2014:33-50; Munro 2017:19; Lessac 2019:34)	Making use of Lessac's Potent and Buoyant body NRG's, the dancers were able to sustain the limited amount of oxygen with the embodiment of the emotion.	Making use of Lessac's Potent and Buoyant body NRG's assisted the dancers in their ability to sustain the constant retreating and rising of the body.	The Potent body NRG was mainly used to sustain the tension in the facial muscles.
Laban Movement Studies (Bradley 2009:32; Hackney 2002:239-243; Wahl 2019:93-97 & 115-120; Studd & Cox 2013:137-138&147-148)	The main focus was on the Effort Factor of Time and its Quick element, as both inhaling and exhaling would be quick and shallow. Yet, the Sustained element assisted with the holding of breath as the dancers did not want to smell the stimulus.	Using Laban's Effort Factor of Flow, I was able to facilitate the progression of the movement as Bound - one of the elements of Flow. Effort Factor of Time and the Sustained element was used to explain movement. The dancers' movement became more sustained as they tried to avoid the stimulus. Making use of Laban's Shape Qualities, I was able to guide the dancer in how they relate to themselves and their environment.	The Effort Factor of Space was used to explain how the dancers' attention had to be channelled. When embodying disgust, one wants to move away from something; therefore, the vision becomes Indirect to try to avoid looking at the stimuli or possibly to distract one from thinking of the stimuli.

DISGUST	Breathing Pattern	Effector Patterns	
		Body Attitude & Expression	Facial Traits & Expression
		I mostly made use of the Rising and Retreating shape qualities when guiding this emotion. Rising was used so the dancer could possibly get away from the stimulus, along with Retreating, to move away. These qualities allowed the dancers to grow further away from the stimulus, making their movements sustained, strong and more prominent.	The Effort Factor of Time was also used as the heads moved backwards in a Sustained manner - trying not to make the movement too obvious in the environment or to the stimulus that is seen/smelt.

It can be deduced from the information provided in Table 4.3, that there are particular patterns that have to be executed in the way one breathes, orientates the body, and integrate certain facial traits when embodying and facilitating disgust. LMS and LK approaches greatly assist in how the effector patters are executed and sustained. As previously discussed, the EP combined with the LMS and LK approaches are referred to as the 'three strategies' used to embody the emotions. Significant scholarly discourse was integrated to facilitate the emotion of disgust.

The general vocabulary generated from the three strategies used when facilitating the breathing pattern for disgust was as follows: shallow breathing through nose; varying between quick and sustained time; and integration of Potent and Buoyant body NRG's.

The general vocabulary generated from the three strategies used when facilitating the body expression and orientation for disgust was as follows: retreat upward and backwards; narrowing shoulders; sustained movements while rising in body orientation; and using Buoyant and Potent body NRG's.

The general vocabulary generated from the three strategies used when facilitating the facial traits for disgust were as follows: raise cheeks, curl upper and bottom lip upwards; narrow eyes; indirect focus; sustained facial expressions; and Potent body NRG's.

Despite the three strategies used to embodying the emotions presented in the tables, personal uniqueness still had an impact on how emotions were experienced and expressed/portrayed. The following section expands on the effect personal uniqueness had on the expression of the three strategies to embody the emotions.

4.1.3 The effect personal uniqueness had on the embodiment of the three emotions

As stated in chapter two, emotions can be experienced uniquely by each individual due to the unique signature of the individual's socio-cultural background. Even though the three strategies were used to embody each of the three emotions, I observed that all three emotions were expressed and experienced differently by the three dancers. The section below discusses how the three emotions were experienced and expressed from my perspective by the dancers. I further expand on how I perceived the differences in the portrayal of the emotions, and how we collaborated to overcome the differences present, in unified expresser patterns to the audience.

4.1.3.1 Anger

I observed from the dancers' embodiment of anger that the three strategies associated with embodying anger are similar to those of fear[161]; thus, they all struggled to fully experience anger on the first attempt. According to Bloch (2015:105), anger and fear are on the same axis of body attitude regarding muscular tension, but on the opposite ends when it comes to body orientation regarding avoidance and approach. This implies that anger and fear may initially appear to be similar, but there are slight changes that are vital in embodying and triggering the emotions effectively and independently. For instance, focusing on the body being in a forward/advancing orientation when embodying anger, and when embodying fear, the body orientation is retreating and enclosing.

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[161] It is acknowledged that the breathing and facial patterns of these two emotions (anger and fear) are substantially different. However, when observing these emotions on a body that is dancing the patterns might not be easily distinguished due to the breathing pattern that might change as a result of the increased level of oxygen needed to dance and execute the movement. It is further acknowledged that the observation of both anger and fear is easily recognisable when the body is not dancing.

With the dancers' second attempt all three dancers seemed to experienced warmth in their faces as their cheeks flushed, and their faces became sweaty. As mentioned in chapter two, anger triggers an increase of blood flow to the skin, changing the skin temperature and increasing the heart rate. It was also observed that anger does not form part of the dancers' 'comfort zone', yet it appeared that embodying anger was easier than embodying fear. This was deduced because the dancers appeared to be uncomfortable with the facial traits that form part of anger, yet anger was triggered more easily than fear. All three dancers seemed to have experienced extreme tension in their body as they appeared to be tired after embodying anger. Sheets-Johnstone (1999:263) states that anger is associated with restrained movements, such as clenched hands and wanting to pound, tear, smash or punch. This is what I observed when watching the dancers embody anger.

I further noticed that anger seemed difficult to embody because of small changes and shifts the dancers were not making. In general, it is implied that the dancers had difficulty distinguishing between the strategies for the embodiment of fear and anger[162]. Disgust seemed to be the emotion that was easier to embody. They did, however, with many hours of practice and endless discussions, manage to memorise and embody the strategies associated with the embodiment of anger. The dancers' muscle memory also improved, making it easier for them to embody anger within a few seconds. The effector patterns for anger embodied as personally unique, are discussed separately below.

4.1.3.1.1 Breathing Patterns for anger

As discussed in chapter two and in table one above, the breathing patterns associated with anger are sharp and deliberate, and usually take place through the nose as the jaw is tightly clenched due to tension in the body. The dancers struggled with nose breathing as a result of the physical movement and the increased need for oxygen[163]. As soon as they opened their mouths the tension in the jaw released, resulting in the overlap of the effector patterns associated with fear. I had to constantly remind them to clench the jaw and to breathe through the nose sharply. Thus, as soon as the dancers switched back to the correct breathing pattern,

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[162] As previously mentioned, this might have been due to the micro-movements involved in the eyebrows and its ability to trigger sadness.
[163] It is for this reason that the breathing pattern for anger was not easily sustained throughout the duration of the performance. This may have had an influence on the perception of the emotion by the audience.

they could portray anger more accurately. It seems to me that the dancers felt particularly uncomfortable with the portrayal of anger, as they struggled to keep a clenched jaw, but with practice became easier and more comfortable. I observed that one dancer slowed down their breath and as a result disgust overlapped. This may imply that the dancer often suppresses anger through forcing deep, slow breaths to calm down. From breath leading to the body, the dancers also had to make minor shifts, in order to portray this emotion more accurately.

4.1.3.1.2 Body Expression for anger

Drawing from the information discussed in chapter two and in table one above, the body expression for anger involves a forward/advancing body orientation with tense, sharp movements. All three dancers seemed to struggle with maintaining tension in their bodies, which had an impact on their movements. As soon as they were reminded to keep tension in the body and to advance, as well as spread, the change in the embodiment of the emotion could be seen. I observed that the dancers often found it difficult advance and spread at the same time. Once they spread the weight to ground themselves, they remained upright or started retreating which, once again, moved into fear. Spreading is vital for grounding, and advancing immediately creates the alertness and readiness to fight/attack. Once the dancers got used to the minor shifts in the body, the embodiment of anger became smoother and quicker. The dancers were also able to maintain muscle tension once the advancing and spreading was intact. They then moved on to the facial traits, where more minor shifts had to be made.

4.1.3.1.3 Facial Traits for anger

From my perception, all three dancers particularly struggled to frown. I observed that they were confused by lifting the eyebrows[164], instead of bringing them toward each other. Once they were able to make this shift, the narrowing of the eyes fell in place easily. Flaring the nostrils was also problematic, mainly because the dancers seemed embarrassed to execute this action. The facial effector patterns, including tension in the jaw, was something of which I constantly had to remind them. The dancers explored with direct/sharp focus, which seemed

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[164] As stated earlier, in footnotes (refer to footnotes 157, 158 and 159) engaging with the eyebrows may trigger or invite sadness/crying. Also stated previously, is that the movement of the eyebrows are published in various accepted scholarly discourses, hence the reason for mentioning their movement in this study.

to make them feel uncomfortable, as they kept smiling once they had to focus on an object directly. I suggested that they orientate themselves in a different direction, such as facing a wall in order to feel more comfortable and focused. Not being able to see their faces left me in the dark on how to facilitate them. I therefore decided to keep reminding them of all the facial traits until they were ready to face the front.

To me, it seemed as though one of the dancers was embarrassed to embody the emotion of anger, which held them back in terms of portraying the facial traits. I observed that all three dancers struggled with the facial traits for anger. It was as if they would let go of one trait when activating another. I interspersed the embodying of anger with de-roling until they got used to the room being a safe space to explore. I reminded them that it was natural to release sounds, and that suppressing vocalisations might hamper the embodiment of the emotion.

4.1.3.1.4 Vocalised sounds present due to anger

According to Zhang Liu, Hou, Sun, Cheng and Luo (2014:[sp]), the auditory system develops earlier than the visual system and results in the human brain being especially sensitive to vocalised expressions. It is therefore implied that it is only natural to vocalise or produce sound when embodying emotion. There were certain vocalised sounds that surfaced due to the expression of the emotions. With anger specifically, I observed that the dancers released grunts of frustration and harsh sighs as the breath pushed passed the fixed and clenched jaw. Zhang *et al*. (2014:[sp]) suggest that angry vocal expression "signals a threat-related consequence of social interaction or an attempt to control or change the behaviour of others"; thus, the deep grunts and harsh sighs. I perceived a sense of relief when the dancers were made aware that they could release sounds.

When guiding the dancers through the three strategies to embody anger for the first time, I sensed that they all seemed surprised, as if the patterns were different to what they habitually use to express anger. I came to the conclusion that all three dancers never fully portray anger, but rather combine anger and fear or anger and disgust. I speculate that this is because it seems more socially acceptable than portraying only one emotion independently. I concluded that portraying only anger would make them seem too aggressive and possibly result in violence; therefore, they avoided the emotion completely or combined emotions to make the interaction seem less harsh.

The following emotion to be discussed is fear. From my perception, the dancers often confused the three strategies involved with the embodiment of fear and anger, mainly because of the slight body shifts. I conclude, from the observations and discussion that fear is more acceptable than anger, in all three dancers' socio-cultural background.

4.1.3.2 Fear

I observed a potential temperature increase in their bodies as they became sweaty when embodying fear. This bodily response made sense but generally, one is left feeling a cold sweat rather than a warm one. This implies that anger and fear might have become intertwined. According to Saville (2008:[sp]), fear is associated with "a racing heart, and sweaty, shivering sickness". As mentioned in chapter two, the autonomic and neuroendocrine systems are activated when presented with a dangerous situation. These systems are involuntary and are responsible for changes in heart rate, blood pressure and the release of certain hormones (LeDoux 2002:728). Therefore, the body should drop in temperature and appear colder than usual, and the face could possibly become pale with a cold sweat breaking out.

It appeared as though the emotions were truly felt by the dancers, but as soon as they de-rolled from fear, they seemed only physically tired and not emotionally exhausted or traumatised.

This was a good sign as it implies that they were embodying the emotion only physiologically. This further suggests that the technique used to embody the emotions is purely physiological. The dancers often stopped to drink water as their throats were dry, and they all seemed to feel cold. According to Bloch (2015:1523), it is a normal reaction when fearful. From my observation, all three dancers had tension in their upper back and in their hip-flexers. Ekman (2003:171-172) states that, as discussed in chapter two, when humans are fearful blood spreads to the larger muscle groups in preparation to flee. Often fleeing does not occur, but it does explain the tension felt in the body as fear and anger are positioned for maximal muscular tension (Bloch 2015:105). When fearful, the maximal muscular tension prepares the body to flee as fast as possible, whereas with anger the body is preparing to fight.

4.1.3.2.1 Breathing Patterns for fear

It was observed that the dancers had no problem with fear's breathing pattern, speculatively. I am of the opinion that they are used to breathing through their mouth[165] when dancing. The dancers did, however, have some difficulty with the body expression for fear.

4.1.3.2.2 Body Expression for fear

It seems to me, as mentioned previously, that there was confusion between the embodiment of fear and anger. From my observation, the dancers needed more and clearer guidance on how to make effective shifts in their bodies to be able to embody the emotions. The dancers would often keep their bodies still and embody only the facial traits and/or the breathing patterns. According to Schmidt, Rickey, Zvolensky and Maner (2008:[sp]), freezing is believed to "be a central response to threat" and is often referred to as "tonic immobility". Tonic immobility includes motor inhibition with an "abrupt initiation and cessation" (Schmidt *et al*. 2008:[sp]). Although freezing is a natural instinct when feeling fearful, it often did not read as fear on stage. Through facilitating and reminding the dancers of the body patterns, I observed the difference in their embodiment of this emotion. The narrowing of the shoulders toward the sternum effectively assisted with the embodiment, and from this point the sinking and retreating happened spontaneously. The movements also became bound, quick, and small as they were executed in a small reach space. The upper back tension is possibly caused by the narrowing of the shoulders, and by the tension in the body to keep still. In general, the body expression for fear was easily embodied.

4.1.3.2.3 Facial Traits for fear

The main shift that seemed to be difficult with regard to facial traits was the widening of the eyes[166]. It seemed to me that one of the dancers felt uncomfortable with the expression of facial traits, which made it difficult for them to embody the emotion fully. Once a safe space

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[165] Dancing and executing movement generally require more oxygen than everyday activities, therefore breathing through the mouth may have been easier for the dancers. However, this is not to say that the dancers were able to sustain the breathing pattern throughout the execution of the movement.

[166] This may have been due to the fact that the micro-movements involved in the area of the eyes and eyebrows causing some confusion, as mentioned in footnotes (refer to footnotes 157, 158 and 159) containing the information on the three strategies, between patterns such as crying/sadness. The dancer may have been cautious as the feeling of sadness was lingering.

was created, it was evident that the dancer felt more comfortable and shifted their focus on the facial traits. Even though it was more comfortable for the dancers to keep their mouths open, they did not always activate the lips to form a round vertical opening. As soon as the dancers released the tension in the mouth, it was as though they could not fully embody fear. The vertical rounding of the mouth seemed to assist the widening of the eyes. From my perception, one of the dancers found it challenging to widen the eyes without tensing the bottom eye lid. This resulted in an overlap with anger.

4.1.3.2.4 Vocalised sounds present due to fear

I would describe the sounds associated with the emotion of fear as a gasp for air; squeals, and being out of breath. It almost sounded as if the dancers were crying, but without a whining sound. If one were to close one's eyes during this emotion's embodiment, it would possibly be perceived as sadness. This is why the accuracy in the physical portrayal of the emotions is vital. The last emotion to be discussed is disgust, and is reflected upon below.

4.1.3.3 Disgust

It appeared as though all three dancers felt nauseous when they embodied disgust for the first time. I also observed tension in their abdomen. As mentioned in chapter two, disgust is the repulsion of a certain stimuli (Ekman & Cordaro 2011:365), which explains the nauseating expression portrayed by the dancers. It further appeared as though the dancers felt claustrophobic and struggled to breathe, as if they wanted to get away from the spot they were in. I also observed that the dancers had tension in their throat, as if their throats were constricted. It appeared that there was tension behind their neck into the lower skull. This might have been caused by their shallow breathing to suppress the nausea (Melo, Kenny & Gratch 2010:227), as discussed in chapter two. While observing the dancers, I felt nauseous and disgusted. As a result, I thought disgust could possibly be perceived the most and the easiest by the audience members.

4.1.3.3.1 Breathing Patterns for disgust

As briefly discussed above, I observed that the dancers struggled to breathe, which is exactly what would happen if shallow breaths were induced. Holding their breath due to something

that made them feel nauseous was exactly what I hoped would happen. Disgust can, however, be felt when another individual does something repulsive. This would be difficult to portray as all individuals find different actions offensive and repulsive. Instead, it is much easier to feel disgusted due to a certain smell and/or visual image to correlate with the smell. I observed that all the dancers held their breath as they associated disgust with a repulsive smell.

All three dancers seemed to have similar breathing patterns. Some held their breath longer than others, whereas some kept taking shallow breaths and swallowed often.

4.1.3.3.2 Body Expression for disgust

Owing to the desperate need to get away from the stimuli that were making the dancers feel disgusted, their bodies tensed and tried to retreat and rise away as much as possible. The choreography confined the dancers to the couch, which made it difficult to get away from the stimuli. This could possibly explain the tension in the dancers' necks and skulls.

In general, through the use of the three strategies, the body patterns of disgust were much easier for the dancers to embody. It seems that they struggled to remember to rise, but as soon as they were reminded, they shifted their body orientation. The shift made a huge difference in the portrayal of the emotion and also assisted with the facial traits portrayed.

4.1.3.3.3 Facial Traits for disgust

The facial traits generally evident in disgust, manifested very differently on each of the dancer's faces, but they all followed the same pattern. This was very interesting to observe, as fear and anger had similarities in all three of the dancers' expression thereof. The curling of the lips looked strikingly different on each face as some dancers curled the bottom lip along with the top lip. It seemed that the other dancer pursed the lips more. The difference in the lip movements resulted in different activity in the cheeks. It appears as though the more the bottom lip curls, the more the cheeks rise. One dancer turned their head to the side, while the others kept their heads tilted slightly to the side, almost looking up to the ceiling.

All three dancers narrowed their eyes. One dancer looked up to the ceiling more often than the other two dancers. The dancers also wrinkled and moved their noses differently. One dancer

wrinkled their nose more intensely, while the other dancers flattened the skin on the nose by frowning and pursing the lips downwards. In general, it was observed that all three dancers portrayed disgust. They all looked quite different while executing similar effector patterns. With reference to the discussion in chapter two, Rozin and Fallon (1987:23) state that disgust has "a characteristic facial expression" that portrays the need to distance oneself from an object, the nausea associated with the object, and the repulsion of the loathing experience.

4.1.3.3.4 Vocalised sounds present due to disgust

At first it was observed that the dancers felt so nauseous that they "gagged" and then started releasing 'urgh' sounds or 'ehw' 'erhm', which immediately had an impact on how I felt while observing them. I started feeling nauseous too, and I was not deliberately embodying the emotion. This relates to what was earlier stated in chapter two, that disgust is an important emotion that shapes moral judgement and probably triggers empathy (Schnall *et al*. 2008:1096). The perception of the dancers portraying disgust thus triggered memories from my lived experience (Byrne 2010:17); therefore, I could relate and perceive the emotion.

Reflecting on all three emotions, it was remarkable to see how invested the dancers were; every time they embodied any of the emotions, there would be sounds. This implies that they were focused on the process of embodiment. From the embodiment of the three emotions, to how the emotions were integrated within choreography, is discussed below. I collaborated with the dancers in choreographing a performance incorporating the three emotions in a context familiar to South Africans. The following section will discuss what choreography entails and how choreography was generated into the performance.

4.2 The choreographic process

4.2.1 Choreography and choreographing a performance

According to Farrer (2014:95), the work of the choreographer "is analysed in an attempt to understand how dance is successfully produced". The choreographer therefore appears as the "creative subject in the process of dance making" (Farrer 2014:95). McKinlay Kurdaedy (2009:8) defines choreography as the designing and arranging process of bodies in which

movement occurs to create a performance. She further states that a performance is a form of art designed to have a specific impact on the audience experience. Calvert, Bruderlin, Mah, Schiphorst and Welman (1993:115), similar to Mckinlay Kurdaedy, posit that choreography is a "compositional design task that requires a set of skills related to creating, structuring, and forming" a production/performance. In this study, I choreographed a dance-based physical theatre performance incorporating three ur-emotions, namely: fear, anger and disgust. The aim, as indicated previously, was to investigate whether the audience members could perceive and distinguish between the three emotions that were portrayed within the performance.

I hypothesised that in general, emotions are not necessarily crystallised in physical theatre. However, through the integration of the three strategies to embody the emotions, as mentioned in the tables discussed previously, physical theatre can possibly offer a different experience for the dancers/performers and the audience.

Studies have shown that the body's high degree of flexibility makes it challenging to "uncover cues that are conveying emotional content" (Camurri, Lagerlöf & Volpe 2003:214). Siegel (1993:6) states that dance has been considered as expressing humanly congruent feelings and appeals to all humans. It has, however, been found that few humans understand the narrative from the choreography, and that the performances are quickly forgotten. Therefore, the performance needs to be so clear that the audience is able to perceive the intent. If an audience can perceive the emotions portrayed, they could possibly have a better understanding of the narrative which holds the context of the performance.

According to Hanna (1983:191), audience members perceive the content of a performance with an expectation shaped by their "individual and social history". The audience, by getting emotionally involved when watching a performance and responding to that performance, reveal aspects of themselves" as encultured human beings" (Alvarez 2011:380). Generally, the choreographer aims to communicate a narrative that provides social comment and critique, along with an emotional experience (Ali-Haapala 2016:9). It is suggested that emotion plays the main role in "regulating human social interactions" (Roether *et al.* 2009:1). Therefore

observation and interpretation[167] of another individual's emotion provides valuable information regarding their individual and social histories.

Throughout the rehearsal process I actively engaged with and drew from a monist approach underscoring a "bodymindedness"[168] (Munro 2017:13) to create effective choreography, for the purpose of this study. The section to follow will engage with the sources I used to gain inspiration for the performance.

4.2.2 Finding a source: beginning my choreographic process

The following discussion will continue to be written in first person, as I will be describing my process in choreographing the physical theatre performance. I will also discuss my personal journal entries from the rehearsal process, which reflect on the observations I made in the rehearsals.

4.2.2.1 Initial impulse of the choreography

Main (2005:112) states that with regard to her directorial process, she is in search for something new. In my search for something new, I had to find a source that moved away from what I previously used as I wanted to challenge myself in terms of source material and investigate whether it would lead to a more organic and creative process. Previously, I used pictures/images as a source to start my choreographic process. The image's colours, lines, and feelings that derived from the image inspired me to create, thus giving me an idea for the choreographic qualities and narrative of the piece. I wanted to challenge myself with the source material, but could not find an image that inspired me or gave me the impulse to create. I had no vision for the movement quality or narrative; all I knew was that I had to portray the three distinct emotions[169] that seemed dark/negative at the time[170]. According to Nagrin (2001:2),

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[167] According to Blakeslee and Blakeslee (2006:1), the mirror neuron system in the brain specialises in "carrying out and understanding not just the actions of others but their intentions, the social meaning of their behaviour and their emotions".

[168] A bodyminded approach draws on the "deliberate engagement with the continuous feedback loop between body and brain" (Munro 2017:13). Lessac Kinesensics uses an acronym SPAR, to present the pedagogical process of body-mindedness: "sensation, perception, awareness and response" (Munro 2017:13).

[169] Anger, Fear and Disgust as discussed in previous chapters.

[170] This was my subjective perception of these three emotions. Owing to my personal uniqueness and social background, I experience these emotions as 'dark', giving them a subjective quality.

when one engages with an impulse, one does not acquire a specific method, one just creates. When this impulse is no longer desirable, the choreographer needs to find and make use of different tools, until there is another impulse (Nagrin 2001:2).

Calvert *et al*. (1993:116) state that a new dance composition starts from a particular stimulus used by the choreographer. Furthermore, these authors assert that "the stimulus can be as varied as a specific physical movement, a musical phrase, a visual image, or a state of mind". Movement can be referred to as "pure dance"; therefore, choreographers develop thematic material and make use of structuring techniques to give their work context (Calvert *et al*. 1993:116).

Dance-based physical theatre is a style of choreography that is context based as it involves thematic material to convey a narrative and can possibly demonstrate traces of the dance background of the choreographer and performers. I had to find ideas and impulses to create context and narrative.

I turned to music, hoping that there would be an impulse to create from the beat or the lyrics of a song. This was, however, an unusual tool to use as I was not going use music in the performance due to music's ability to evoke emotion in the audience. According to Swaminathan and Schellenberg (2015:189), musical cues clearly express emotion; thus, one of the reasons adults listen to music is that it "regulates their own affective state". Hunter and Schellenberg (2010:129) make use of two profound quotations; one from Leo Tolstoy: "Music is the shorthand of emotion", and the other from Michael Torke: "Why waste money on psychotherapy when you can listen to the B Minor Mass" to explain the common reaction to music. Tolstoy suggests that music conveys emotion, whereas Torke's question implies that emotion is influenced by music (Hunter & Schellenberg 2010:129). I therefore made use of music only as an impulse to create choreography. The narrative developed from the impulse, but was mainly created throughout the choreographic process. This study relies solely on the choreography and the performers without the use of music, to portray emotion and narrative for the audience to respond to.

I decided to call the piece *Short Line,* drawing on the name of the song that provided me with the creative impulse: *Shortline* by RY X (Dawn 2016). The lyrics[171] of the song made me think of the daily struggles that trigger emotion. Other than the lyrics, the song is captivating and gave me an impulse to move to it immediately. The tempo of the song also gave me an idea of what the quality of the movement should look like. According to Poikonen, Toiviainen and Tervaniemi (2016:1), vast cognitive and emotional processes are "elicited in the music. Therefore, music is used as a tool by dancers and choreographers for the kinaesthetic[172] expression (Poikonen 2016:[sp]).

Marshall (2008:33) states that when one is connected to one's body, one is able to 'listen' to it. This implies that the body is able to inform one about its internal environment if one is aware of subtle physical reactions and impulses within the body, which lead to external movement (Marshall 2008:33). This relates back to Lessac's (2019:22) fundamental action of organic instruction, which implies "actively engaging, through inner harmonic sensing, with the bodymind, to contribute by choice to aesthetic actions" (Munro 2017:16). In conclusion to this section, the source that triggered the initial impulse to create choreography was a song. The following section discusses how this impulse was used to generate movement and narrative for the performance.

4.2.3 Devising movement and generating a narrative from the source

After an hour of listening and moving to the song, I created initial context and material to portray a narrative. As Marshall (2008:33) indicates, there are subtle hints which are "the indicators of an impulse, a desire in the body to do something concrete in response to stimuli". I recorded

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[171] Shortline By RYX (Dawn 2016) Lyrics:
"Rushing water
One keeps to corner
Turn cheeks and shout out
On a short line
Women willing
Undress your heart-string
Follow your thick thin boy
On a shortline
Let's run to shelter
From Violence, for us that haven´t
Hold our tongues and fill our lungs
On a shortline, on a shortline
On a shortline, on a shortline
On a shortline, on a shortline"
[172] Bodily position, presence, or movement sensations (A level Drama and Theatre Glossary 2019:3). Kinaesthetic responses are discussed later in this chapter in section 4.2.7.1.

the choreography and taught it to the dancers at the first rehearsal to introduce a basic theme and quality of movement from which to devise and collaborate with. The choreography I created was very different to my previous choreographic material. I usually choreograph big, flowing, graceful movements, but for the first time, I created movements that were small, sharp, quick and sustained at times. I knew the movement had to tell a very particular story, which brings me to the synopsis of *Short Line*.

Short Line is a dance-based Physical Theatre performance based on daily struggles triggering emotions. Three key emotions namely: anger, fear and disgust are explored and portrayed throughout the performance in no specific order - whilst reflecting the daily struggles experienced by most humans. This performance forms part of a practice-based research project. The aim of the performance is to determine whether the audience members can recognise and perceive the three emotions that are portrayed by the performers at a given moment.

The synopsis of the work does not give the narrative away. This was done intentionally, so that the audience can derive their own conclusion, and think about the movement without suggesting any meaning or providing hints regarding the various emotions. The main idea behind the choreography was for the audience to perceive and recognise the intended emotions, whilst reflecting on the intended meaning of the performance. As the work developed in the rehearsal process, we created a very specific context known to South Africans and through that, a specific narrative was created. The aim of the performance was to crystallise the embodiment of emotions in dance-based physical theatre. The audience could, however, base the experience on their personal circumstances as they were intentionally given the freedom to do so; with the hope that it would possibly assist them in perceiving the intended emotion.

The performance was created through devising, which is a method of creating in collaboration (Morrow, Bauer & Herrington 2009:125). My intention was not to take control and choreograph all of the language [173] used in the performance. As mentioned previously, I decided to choreograph the first phrase of language to introduce the feel of the piece and to allow the dancers to use the choreography to make new and unique language by re-using and adapting

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[173] I refer to the movements that were choreographed and created as a language. We create language to tell a story with our bodies.

the choreography that was shared with them. I also wanted the dancers to learn the movement phrase on which they could lay any of the three emotions, changing the expressive quality of the movement phrases. I wanted them to do this so that they could prepare for the process that was coming. They had to experience the emotions with the choreography in order to mentally and physically prepare themselves for the performance and to collaborate in the devising process. I had to keep all this in mind while generating the movement, as it had an impact on the narrative and embodiment of the emotions.

According to Govan, Nicholson and Normington (2007: 4-12), devising is "widely regarded as a process of generating a performative or theatrical event, often but not always in collaboration with others". It is therefore implied that devising is an active process which includes the performers in co-creating the performance. Through group interactivity, ideas are discussed and made possible through exploring, with movement inspired from the ideas that were discussed. The central dynamic of devising a performance is in the "practice of generating, shaping and editing new material into an original performance" (Govan, Nicholson & Normington 2007: 4-12).

Heddon and Milling (2016:7-9) suggest that improvisation forms a key practice in devising, as it allows for a spontaneous element that produces free creative expression. Within the rehearsal process, the performers were given time to improvise in devising choreography. In essence, the dancers were given certain tasks and from there they were free to explore with various movements. They were encouraged to simply start moving, as some of the dancers seemed to struggle to find a starting point/impulse to create. Improvising to a piece of music allowed the dancers to create and express themselves spontaneously. From there, they were advised and facilitated to memorise and develop the movements that stood out to them. This assisted muscle memory as they created the movements from their personal impetus.

The concept of time formed a major theme in the choreography as all the dancers and the audience could relate to the concept of time in some way. When I engaged with the dancers' first task, as discussed in 4.2.4 below, the idea of being stuck in traffic became another key concept I wanted to integrate. The choreographic phrases evolved into the idea of being stuck in traffic, and then the strategies for embodying the emotions were incorporated into the movement, changing and enhancing the quality entirely. The following section discusses the role of the performers and the influence they had on the choreography.

4.2.4 Performer's role in the choreography

According to Muntanyola (2011:1859), dancers depend on instructions and the "amount of verbal information coming from the choreographer". A dancer's body awareness and experience increase when the choreographer is specific "in explaining a task and its relation to the piece as a whole" (Muntanyola 2011:1859). Farrer (2014:95) states that dancers respond to the creativity of the choreographer, which creates impulse for their own creativity and input toward choreographing the performance. Although I facilitated the majority of the choreography, the dancers had a major creative impact on the work and assisted in choreographing, through tasks that were given to them by me. The first task I gave the dancers was to think about the three emotions of anger, fear and disgust from a subjective point of view and to answer the following questions:

1. What do the three emotions, anger, fear and disgust have in common?
2. How do you feel about these three emotions?

The dancers' response to this task shaped the way to the facilitation process. The objective of the task was to prepare the dancers' expectations for the process ahead, as they had to reflect and think about how these three emotions made them feel and react.

According to Kirsh (2011:1), choreographers in the present time allow dancers "to stimulate ideas non-propositionally" through encouraging them to use and think with their bodies and sensory systems. Kirsh (2011:1) further suggests that there are two creative processes: 1. Distributed creativity, and 2. Embodied cognition. The first process involves the dancers and choreographer(s) collecting resources "to interactively invent new concepts and elements" (Kirsh 2011:1) to structure into a production/performance. The second process involves the dancers using their own sensory systems as a means of stimulation, thereby using their bodies as "active tools for physical sketching" (Kirsh 2011:1).

Both the above-mentioned creative processes were incorporated into the choreographic process, giving the dancers a platform to co-create. Before the first rehearsal, the dancers were asked to compile a body of information regarding the three emotions. This compilation provided me as the choreographer, with insight into how the dancers perceived the three emotions we were working with and portraying in the performance. The dancers were later asked to document moments where they had felt any of the three emotions and relate the moments to

their understanding of time passing. Whilst doing this, each dancer had to generate a few gestures to share with the other dancers in the rehearsal to follow. These two tasks that were requested from the dancers, can be regarded as distributed creativity and collected resources in order to invent new material.

The dancers also generated movement by drawing from their sensory system as they were often provided time within the rehearsal space to create movement, whilst listening to specific music. The music evoked certain impulses that they were free to follow and explore. After the dancers had time to create, I would observe the movement and suggest certain shifts and changes to create a better flow. This allowed the dancers to be involved and co-create, while I maintained the role and duties of the choreographer.

Tomic-Vajagic (2012:36) suggests that the dancers' experiences "include deeper cognitive and embodied understanding of the movement performed". The dancers created meaning from the tasks given to them during the creative process. The dancers executed the movements according to the meanings derived from the tasks, while adjusting the movement to suit the aim of the performance. The collaborative process therefore, allowed the dancers to have a better memory and understanding of the movement as they had created it from their 'comfort zone'. Not only did the dancers act as co-creators, they also shared their opinions and insight of the three emotions during the rehearsal process. This provided me with the necessary insight to choreograph more material and to polish the choreography to best suit the dancers, whilst envisioning the final product.

4.2.5 Active process perceived by me as choreographer

By the end of the first rehearsal, the dancers were comfortable with the de-roling processes and were able to follow the steps independently. The subsequent rehearsals focused on creating more choreography that could portray the narrative I had in mind. The focus was on the obsession with time; time passing; being unproductive with the time that one has; and being 'bored' when present in the company of others.

I gave the dancers a task to explore at home. I wanted them to work out a short gestural routine, while thinking about time passing, using Lessac's Radiant body NRG. The dancers came back with constructive movement phrases that were all incorporated and altered to align with the

context and my choreographic vision of the piece. The next few rehearsals focused on creating and memorising the choreography. I did not want to explore with any of the three emotions before creating and memorising at least five minutes of choreography. I decided on this process, because I reflected on the first time I applied effector patterns to choreography in my previous research project. I found the process of executing the choreography while embodying an emotion to be a demanding process that required intense concentration. The intention was for the choreography to become second nature, thereby giving the dancers more freedom to focus only on embodying the emotion and executing the choreography. This in turn, allowed embodied emotion to shape the quality of the movement.

I came to realise that the dancers could not always execute the movements as I had envisioned, and this was due to the dancers' training backgrounds, as well as the injury the one dancer had. This resulted in the choreography being gestural and simple, which was ideal for applying the three strategies to embody the three emotions. I observed that the dancers struggled to remember the choreography and we spent many hours polishing the movements and transitions to best suit their bodies. The body NRG's did, however, assist with the choreography, along with Laban's descriptors of Basic Body Actions which consist of: Gesture, Flexion, Extension, Rotation, Jump, Travelling, Change of support, Gather, and Scatter (Studd & Cox 2013:134). Interesting choreography emerged by using the Basic Body Actions. After a movement phrase was created using the Basic Body Actions, the three body NRG's were incorporated to possibly enhance the quality of the movement and to expand the movement phrase.

I noticed a tendency in the dancers to create movement that involved the upper body more than the lower body. The lower body created stability while the upper body was mobile, executing movements that were sharp, direct and bound with pulse-like movements in the chest and head at times. Bradley (2009:70) states that "movement that originates from particular areas of the body, such as the head, heart and gut, help get one's point across in richer ways". According to Fernandes (2015:23), "for Laban, movement encompasses the whole man (sic) - physical, emotional, intellectual, and spiritual". Through the use of Laban's vocabulary, the dancers and I were able to create movement that incorporated the physical, emotional, intellectual, and spiritual aspects from our personal contexts, making it as relevant as possible to the audience.

Furthermore, Fernandes (2015:23) states that movement is "powerful in its ability to communicate". I therefore reminded the dancers of total body connectivity, and guided them in adapting some of the movements to activate the entire body. Using their whole body, the dancers were able to portray a more powerful narrative, while embodying various emotions. Total body connectivity[174] was vital as the dancers had only limited performance space on stage and were mostly moving on a couch. Through the use of the entire body the dancers could portray the movements more expressively in the small space. The following section discusses the spatial design and scenic devices that were incorporated into this performance.

4.2.6 Spatial designs and scenic devices

The general space we used was much smaller than I would usually use. As part of the creative impulse, I decided to use a couch as a scenic device due to the significance a couch plays in my daily routine. I play many different roles on a couch in my daily routine. I rest on the couch, I eat lunch on the couch, I work on the couch at times and I socialise with my family and friends on the couch. I also noticed that I have a preferential spot on the couch. The use of a scenic device[175] was also new to my choreographic process and my style. I generally use a bare, large space when choreographing. The use of the couch might have been inspired by the environment I was in when I started choreographing. I was in my lounge and used the couch instead of moving it out of the way. This might have been a result of my knowledge of the foot injury of one of the dancers. I decided not to take a chance, and to have a relatively stable scenic device to avoid further injury.

With a narrow intimate space, a couch as a scenic device, an injured dancer and no music, this performance was unlike anything I had ever choreographed previously. Making use of the couch was a reflection of how I used space and time during the day. According to Qian (2015:110), the expressive force of dance is enhanced by dance props and a set as it depicts the "character's inner" world; creates typical stage environment; converts the space and time; decorates stage colour, and; enhances dance atmosphere and dance rhythm". The use of the couch definitely enhanced the expressive force of the choreography, which made the

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[174] Total Body Connectivity forms part of the Principles of Bartenieff Fundamentals and suggests that the "whole body is connected, all parts are in relationship. Change in one part changes the whole" (Hackney 2002:41).
[175] A scenic device is an object that forms part of the set that is placed on stage for the performers to use as part of their performance (A level Drama and Theatre Glossary 2019:5).

performance more relatable and possibly more interesting, contributing to the emerging context of being stuck in traffic.

I chose to make the space intimate as I often feel claustrophobic in small spaces, and I wanted the dancers and the audience to also experience that feeling when watching *Short Line.* I was of the opinion that the three emotions would have been enhanced by the limited use of space. In order for the choreography to work in the space, the movements had to be prominent, sharp, and precise. The narrow and intimate space was also a conscious decision based on the knowledge I had from previously working with embodied emotions in physical theatre. I knew that fear and disgust are emotions that do not use a large kinesphere, which meant that a bigger space would end up looking bare. Anger uses a larger dimension in space, but I was curious to see what a small space would allow this emotion to do choreographically.

The section to follow is a discussion on the forming and shaping of the choreography, and the personal impetus that surfaced during the creation of the choreography.

4.2.7 Forming and shaping the choreography with intended emotions

Two weeks before the performance we started experimenting with the three emotions and gradually incorporated them into the choreography. I slowly introduced the dancers to one emotion per rehearsal, allowing them to step into the emotion and then had them de-role to ensure that they felt safe at all times. According to Shafir, Tsachor and Welch (2016:[sp]), there are familiar and/or habitual movements and characteristics that enhance certain emotions, including anger, fear and disgust. When adopting these characteristics in physical theatre, for instance, the aim is to enhance corresponding emotions or to consciously avoid or reduce associated feelings.

After experiencing the embodiment of each emotion[176], we had an in-depth discussion on what the dancers experienced. The discussions and reflection period were vital for the dancers to make sense of the effector patterns, and the effect the three strategies had on their bodies. These discussions and reflections also assisted me, as choreographer, to facilitate the effector patterns more efficiently to suit the dancers' understanding.

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[176] See sections 4.1.2 and 4.1.3 above.

Sheets-Johnstone (1999:262) developed a self-observational technique entering on a "tactile-kinaesthetic awareness of the tension level of one's specific and overall bodily musculature". The principle behind Sheets-Johnstone's theory states that "neuromuscular tension is emotionally laden" (Sheets-Johnstone 1999:261). She further states that muscles and the brain "proceed together in one effort-circuit", meaning that movement and emotion are intersected[177] (Sheets-Johnstone 1999:262). It is therefore implied that when one is aware of the body tensions, one is able to step-out of certain emotions by releasing the tension in the body or face. When embodying an emotion, the dancers took on the necessary tensions associated with the specific emotion, and when de-roling (even during the choreography), the dancers released the tensions and stepped into a neutral body which possibly tied in with Bloch's effector patterns for tenderness[178] - the feeling of releasing muscle tension and feeling light. It was necessary for the dancers to be able to step back into a neutral body[179] as fast as possible, so that they could prepare for the next emotion to be embodied. The choreography was created in such a way to assist the dancers with a quick release of tension and to prepare them for the embodiment of the next emotion.

We started exploring with fear, then anger, and then disgust. In light of the previous discussion in section 4.1.2 and 4.1.3, it is suggested that all three dancers experience the same emotion differently and that the experience of emotion is unique according to each individual. Even though the emotions are experienced uniquely, the emotions are portrayed similarly by each dancer. This is due to the fact that emotional states are affected by changing body movements, body orientations, and facial expressions, as well as breathing patterns (Tsachor & Shafir 2017:1). After experiencing the emotions individually, as described in the table in section 4.1.2, we started adding one emotion to a short phrase of choreography and discussed how the embodiment of the emotion changed the movement. I observed that all three dancers struggled to allow the emotion to influence and reshape the movement of their bodies and that they could not remain fully embodied while executing the choreography.

I perceived that the three strategies used to embody the emotions did not allow for all the movements to be executed as planned in the previous phase of the process, and this seemed

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[177] This relates to the "bodymind" as discussed earlier in this chapter.
[178] Tenderness forms part of Bloch's basic six emotions. Tenderness is regarded as a positive emotion, therefore some of the effector patterns were tied in at certain moments for the dancers to fully step-out of the emotion they were embodying.
[179] See section 4.1.1 above.

to frustrate the dancers. For instance, turning while embodying anger was shaky, and executing certain head movements were lost due to the sharp focus of anger. The three strategies used to embody the emotions also affected the tempo and quality of the movements. It was clearly visible that all three dancers got tired easily when embodying the emotions simultaneously, with the execution of the choreography. Owing to the changes in tempo and quality, I observed that the dancers struggled to get through a short section and had to de-role. The dancers were clearly exhausted, physically and mentally as it takes great concentration to stay embodied and remember the choreography.

A few rehearsals later the dancers started intertwining and combining the three strategies used to embody the emotions, especially for the emotions of fear and anger. This was problematic, because the emotion portrayed became difficult to perceive and recognise. I decided to take a step back and we started embodying each of the emotions individually, focusing on all the effector patterns, along with the approaches of LMS and LK attached to each emotion. This is where the terminology from the three approaches/strategies EP (as derived from AE and the work of Bond), LMS and LK assisted greatly as discussed previously in the table in 4.1.2.

The purpose of the next few rehearsals were about muscle memory and memorising the choreography that was diligently crafted to embody the different emotions. Although the dancers got tired, I observed that the embodiment of the emotions became more organic as the dancers got stronger and fitter. The embodiment of the emotions did not seem to affect them emotionally or mentally.

After the two performances, all three dancers de-rolled and it seemed as though the process of de-roling became part of their daily routine. It even seems to me that one of the dancers became more assertive in certain situations because they could adapt and make bodily shifts to suit the social environment more accurately. I perceived that the effector patterns combined with the approaches of LMS and LK are certainly the best way to facilitate and embody emotion for any performance. It would not have been possible to dance while embodying the effector patterns, without the use of LMS and LK. Through the use of specific effector patterns combined with LMS and LK, which can be referred to as familiar and/or habitual movements and characteristics that are associated with certain emotions, the dancers were able to step into and out of different emotional states throughout a 12-13 minute performance. It is therefore

confirmed that the strategies[180] for embodying the three emotions were an effective tool for embodying emotion in a physical theatre performance. Kinaesthetic responses play a vital role in a performer's ability to react appropriately to sensory cues. The section to follow elaborates on kinaesthetic responses and how they were used in the performance.

4.2.7.1 Kinaesthetic responses[181] in forming and shaping the choreography

According to Glass (2005:107), dance is a "multimodal sensory and perceptual experience", and observers of the performance are likely "to experience visual, aural and kinaesthetic stimulation". In this performance in particular, the dancers had to be kinaesthetically aware as the embodiment of the emotions relied on their use of sensory stimulation in relation to one another. Bogart and Landau (2005:9) refer to kinaesthetic responses as the "impulsive movement that occurs from a stimulation of the senses". This performance did not have specific music cues for the dancers to respond to, therefore they had to rely on one another's sounds and movements. For instance, when embodying anger the movements become harsh and percussion sounds are possible when the limbs connect with each other. Most of the time the dancers had to rely on imaginary cues that could evoke a kinaesthetic response, such as hearing something in a corner of the stage to create an impulse to move the head to the origin of the imaginary sound. The imaginary sound then triggered the embodiment of an emotion.

The effector patterns combined with LMS and LK also assisted in creating context and narrative, without the use of music. The following section discusses why sound instead of music was used in the performance.

4.2.8 Music and sound in the choreographic process

As previously discussed in chapter two and three, music was not incorporated due to its influence on how emotions are perceived. It was therefore decided to use traffic sounds, rather than music to create a context which both the audience and dancers, as South Africans, could relate to. The traffic sounds provided a stimulus which the dancers could have used as a trigger to embody the emotions. It seemed as if the dancers did not even notice the sounds. They

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[180] EP, LMS and LK.
[181] Kinaesthetic response forms part of one of the nine Viewpoints as offered by Bogart and Landau (2005:9).

were so focused on the execution of the movements and embodying the emotions that all the external sounds seemed to be eliminated. I do, however, speculate that the sounds influenced them, albeit not consciously.

The soundscape created a context for both the dancers and audience. The dancers could therefore fully invest in the narrative by listening to the soundscape, even though the soundscape might not have had an effect on the dancers' kinaesthetic response. The dancers might have used the soundscape to stay in character to be able to respond appropriately.

The audience members did, however, notice the traffic sounds. Some audience members commented in passing to me that it added to the narrative, but did not have an effect on their perception of the emotions that were portrayed. When I was first exposed to dance-based physical theatre, I was advised to move through the music or sounds that were playing; the music or soundscape was merely there to contribute to the context of the piece.

The context that arose from the theme of this piece was therefore finalised only after the soundscape was added. The traffic sounds created context to the time that is passing and the frustration and anxiety that is sparked when sitting in traffic. It may be road rage, fearing a near death experience due to an unexpected accident on the road, or being disgusted by a smell or visual from outside or inside the car. The theme of time was easy to relate to, as most humans work on a tight schedule. Most audience members have driven a car and have been stuck in traffic, which allowed them to relate to the narrative of the story based on their lived experience.

In creating a context that the dancers and audience could relate to, the choreography also had to be refined. The following section discusses the process in refining the choreographic choices.

4.2.9 Refining the choreographic choices

Nagrin (2001:2) states that there are two sides to the creative process: the first aims to "release the inner forces that fuel dance", and the second "intellectually sharpens the conceptualising tools that shape the dynamics and the direction of the work". It is thus implied that the first side is the choreographic impulse that inspired the choreographer to create. In this case the choreographic impulse, as discussed previously, was the Ry X song and the couch as a scenic

device. The second side is refining the choreography through the use of conceptual and choreographic tools to crystallise the intended meaning and to make it aesthetically pleasing to the audience. For instance, two choreographic tools that were used in this process were repetition and variation. Furthermore, Nagrin (2002:2) suggests that any choreographers who keep a balance between the two sides "will have the power to organically link the specifics of phrasing counterpoint and relation to music that go into making the chains of movement, the use of space and the use of dance". According to Marshall (2008:55), "emotion, like any impulse, can be triggered just as effectively by image, or empathy, or sensation, or pure imagination".

In light of the above, I kept a balance between the two sides of the creative process by following the creative impulse and allowing the dancers to co-create. I used my choreographic eye to adjust the movement of the dancers if necessary. This way the dancers felt included in the process and allowed them to feel more comfortable in the space. As briefly mentioned above, I used tools, such as repetition and variation to refine and provide textured choreography, yet kept it simple enough for the dancers to execute and remember.

Slutskaya (2006:150) states that repetition aims to make links between the "old and the new, the creative and the unimaginative", and could possibly assist in generating "an infinite array of creative practice". For this performance, we devised one phrase and repeated it three times. Each time the phrase was repeated in a different direction, where the performers would physically move the couch to face a different direction. The phrase also changed in its repetition as different emotions were portrayed at different intervals each time. Variations were created by repeating the same phrase, but adapting it as lifts were added and the positions of the dancers on the couch would change. The repetition added to the intense narrative and context, as the phrase became more vigorous with each repetition. Even though the phrase changed slightly each time it was repeated, the movements were still recognisable, generating meaning and variation, especially when the phrases were executed with various emotional intents.

The use of repetition and variation tied in perfectly with the concept of time. I wanted *Short Line* to portray people's obsession with time and how it left me feeling angry, scared and disgusted; three emotions which are not usually expressed in my social cultural paradigm. The dancers were creative and seemed to grasp the concepts I needed them to integrate into the choreography. They could easily relate to my personal impetus, the initial choreographic

phrase that I shared with them, and the guidelines/tasks I provided. The dancers seemed rather surprised, yet relieved when they saw the language I created, as if they were expecting something more challenging.

Recalling my previous choreographies, I think all the dancers were relieved that the choreography consisted of intimate gestures and simple movements they could all learn with ease. The simplicity of the movement made it easier to refine and express the three emotions clearly.

As previously mentioned, one of the dancers had a serious foot injury and could not place any weight on their left foot. The dancer injured their foot two weeks before the rehearsal process started. Normally, I would not work with injured dancers due to the risks involved, but in this instance, I wanted to challenge myself as I knew she could remain seated for the duration of the performance. The initial choreographic phrase, choreographed in a standing position, was thus adapted and refined to suit the injured dancer in a seated position. The injured dancer had to be shifted and moved by the other two dancers to different placements on the couch. The lifts and shifts also had to be refined to make it look aesthetically pleasing.

After all the choreography was created, the movements had to be adjusted due to the embodiment of the emotions. The dancers realised, as previously offered, that swings and turns were difficult when embodying any of the three emotions; therefore, we decided to adjust and simplify some of the movements we had created in the initial choreographic phrase to make execution easier for the dancers. The dancers had to be extremely aware of one another as there were no set counts. The movements were elementary enough for the dancers to execute them perfectly in time with one another. The spatial relationship between the dancers was placed in such a way that they were always able to be spatially aware of one another. In this way, the dancers would not hurt one another when executing the movements, even if they were just centimetres apart.

The following section reflects upon the choreography and how Ballet and Contemporary dance influenced the choreography. This section also concludes the chapter.

4.3 Reflection on the choreography and the embodied emotions

This section will include a reflection on the choreography and how the choreography was different to the work that I have previously choreographed due to the use of three approaches: EP, LMS and LK.

According to Main (2005:107), the choreographer's signature is identified through the staging of the dance work, therefore making the style [182] of dance a fundamental aspect in choreography. Furthermore, Main (2005:107) states that if the style of the work is not clear, the choreographer's work will not be understood by the audience. Doris Humphrey's style, for instance, accentuated the pelvis "as the centre of movement initiation, with its interconnecting relationship to breath and abdominal muscles" (Main 2005:107). Humphrey's central principles were that of 'wholeness' and 'dancing from the inside out', creating the foundation of her 'Fall and Recovery' philosophy, thereby creating a clear signature for her choreography (Main 2005:107).

In general the choreography for this performance was gestural[183], sustained and controlled before adding/using the strategies to embody the emotions. Although the movement was gestural, it was still choreographed through the lens of dance-based physical theatre, due to the style of Ballet and Contemporary dance that had such a major impact on how I facilitated the dancers in executing the movements.

The performance related back to Ballet due to the control that was placed in the upper body, which drew from basic Ballet principles. The arm movements of the dancers were often elongated and controlled and the use of turn-out in the legs were executed for turns and lunges. To safely execute jumps and lunges, starting and ending with bent knees is vital (the bending of the knees is known in Ballet terminology as plié). When embodying disgust, the dancers had

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[182] According to Main (2005:107), style can be observed through the structural aspects of movement, ideas and physical actions. Style is, however, prone to evolve and change over time.

[183] A gesture is a "Shape with a beginning, middle and end" and involves "a part or parts of the body" (Bogart & Landau 2005:9). Both Behavioural and Expressive gestures were used in the choreography. Behavioural gestures include everyday observed human behaviour, such as pointing and sniffing for instance. Expressive gestures include the expression of an emotion or an inner state, a desire, an idea or a value. Expressive gestures are "symbolic rather than representational", for instance, an expressive gesture might be "expressive of, or stand for, such emotions as joy, grief or anger" (Bogart & Landau 2005:10).

to draw on the Principles of Ballet in defying gravity to assist them in rising away from the stimulus/object.

Referring to the Principles of Contemporary dance, the choreography integrated contraction and release in the dancers' bodies when embodying the emotions. The dancers' heads often released when turning, adding a different texture to the movement. Throughout the choreography the dancers were mostly grounded, which is another Principle of Contemporary dance, assisting them in the embodiment of the emotions of fear and anger. Breath, from the Principles of Contemporary dance, was a vital tool in portraying the breathing patterns of the embodied emotions, as well as regulating breath when stepping out of the emotion. Moreover, the principle of inward focus from contemporary dance, was incorporated as the dancers had to be emotionally aware and expressive while dancing.

Although none of the dancers was Ballet or Contemporary trained, I drew on my embodied knowledge of the styles to assist the dancers in executing the movements with more control and presence, with and without embodying the three strategies. The choreography was different from my usual style of dance and physical theatre. Usually, I incorporate many turns, jumps, and alternate between quick and sustained movements drawing on my dance background. The choreography I usually create makes use of the entire space, as mentioned previously. For this study, I consciously decided to create movement in a small and narrow space, but the movements were still mostly technical and controlled due to the influence of the abovementioned styles.

The gestural movements along with the strategies to embody the emotions defined the quality of the movement and as a result, assisted in creating meaning and context. The movement phrase executed without the embodiment of the emotions became completely different in comparison to when the emotions are embodied while executing the movement phrase. The embodiment of the emotions changed the execution and quality of the movements[185], and altered my style of choreography. The gestural movements therefore, made it easier for the dancers to embody an emotion and apply it to the movement, especially since one of the dancers was injured.

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[185] This aligns with the outcome of my previous study where I used Body, Effort, Shape and Space from LMS to analyse the changes in the movement phrase when embodying effector patterns.

This chapter delineated how the choreography was created and refined, along with how the three emotions were integrated within the choreography. It was also mentioned that the choreography changed, once the effector patterns combined with LMS and LK were integrated into the original choreography. According to my perception, the three emotions were clearly expressed and portrayed by the dancers. The portrayal of the emotions, according to my perception, was also executed in such a way as to give the audience members enough time to observe the emotion, think about the emotion, and record the perceived emotion on the mobile application. According to Bradley (2009:65), similar to Dale, Hyatt and Hollerman (2007:90) and Cohan (1989:710):

> "every little movement does not have a meaning of its own, but every little movement means something to the mover, and therefore resonates (or does not resonate) for the audience of the mover. Interpretation is often tricky because as observers, people impose personal and cultural perspectives and beliefs onto observation".

The following chapter will commence with the time line of the particular time intervals that indicate when the three emotions were portrayed/expressed during the performances. The chapter to follow will also discuss the perception of the audience members based on the data that were collected from the mobile application, to indicate whether the audience could perceive and distinguish between the emotions that were portrayed in the performance.

CHAPTER FIVE: DATA COLLECTION AND INTERPRETATION

This chapter, as briefly mentioned in chapter four, will provide the time-line that indicates the particular time intervals of the portrayed emotions during the performances. Furthermore, this chapter will analyse and discuss the raw data collected from the mobile application that was designed specifically for this study. The data are analysed with an in depth reflection of the information as discussed in chapters two, three, and four. Tables and figures are used to display the data that were collected. The tables and figures are analysed and discussed with reference to the choreography and the emotions portrayed at specific time intervals. This chapter also reveals whether the audience members perceived the emotions within the dance-based physical theatre performance. The data from the first and second performance are compared to determine whether regular theatre goers are more likely, than individuals who do not go to theatre as often, to perceive emotion accurately[186].

The following section will discuss the choreography and how the emotions were included in the performance, thereby providing the time-line which indicates the time intervals of the emotions during the two performances. The intent with the performances was to present a clear and definite embodiment of the emotions within the choreography.

5.1 Choreography and the portrayed emotions

The choreography was composed with specific time intervals in order to provide the audience members with sufficient time to observe the emotion as portrayed by the dancers, to think about the emotion and to record the emotion they perceived on the mobile application. Each emotion was portrayed and expressed for 10 to 20 seconds in length. The embodiment of the various emotions was placed in a specific order only known by the dancers' and I. The emotions were portrayed more than once throughout the duration of the performances to determine whether the audience members could distinguish between the three emotions. Some of the emotions were portrayed directly after one another, with only a one-or-two second interval between the emotions. This was done deliberately; the randomised presentation of the embodiment of the

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[186] The first performance was for invited audience members only. These individuals are regular theatre goers and familiar with physical theatre. The second performance (also invited members) was for the family members and friends of the performers, who do not watch performances that as often, and who are not as familiar with physical theatre.

three emotions contributed to the efficacy of assessment and determined the answer to the question investigated.

Owing to the ephemeral nature of the performance, I was aware that slight shifts might occur and as such, I watched and plotted the time-line of both performances, to ensure that what was planned in the rehearsal process, was present in the performances. The performances were also recorded/filmed, so that the accuracy of the timing of the emotions could be revisited. The timing on the tables[187], provided on the pages to follow, were compared to the data recordings of the audience members on the data file[188]. Figures one and two on the pages to follow, present the timing of the first and second performance in ten-second intervals and reflect exactly when the emotions started and ended within the time intervals. These tables also indicate when the emotions were portrayed and how far apart they were portrayed. In the presentation of the tables, I made use of colour-coding in order to make it easy to read and understand.

As indicated in tables 5.1 and 5.2 below, the same structure and sequence of emotions were portrayed in both performances where the same choreography was executed. The emotions were, from my perspective, clearly observable during the indicated times. These time indicators basically align with the order that was planned and rehearsed during the rehearsal process. The time intervals were slightly different in each performance due to the dancers not having specific music cues, thus emphasising the ephemeral nature of live performances. The emotions were portrayed according to the specific choreographic cues present in certain movements.

Although the dancers had a set rhythm and tempo, the duration of those movements could not possibly have been timed perfectly, as they worked with breathing that was not always consistent due to the emotions they had to embody. The dancers were also provided with the freedom to embody the emotions in their own time, but they had to remain consistent in being in time with one another and in the ensemble relationship. Even though there were minute

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[187] The tables were constructed through revisiting the recorded timing on the videos of the performances. See tables 5.1 and 5.2 below. Through observing the time intervals on the videos, I was able to create an accurate time-line indicating the exact time intervals of when an emotion started and ended.

[188] Refer to Figure 3, in section 5.3 later in this chapter, to see a visual example of how the data were presented after the performance on the data file. After the performance, I printed the data file and manually highlighted every emotion that was perceived correctly. From there the data were documented on a spreadsheet, which will be presented later in this chapter.

differences in the timing of the two performances, the emotions were still portrayed, as mentioned previously, for 10-20 seconds at least, giving the audience a sufficient amount of time to observe, process and record the emotion they perceived on the mobile application.

It is observed from the tables above, that there were minute differences in the timing of the performances, as mentioned previously due to ephemeral nature of live performance. It is however, also evident that the emotions were portrayed in the same order in both performances[189]. In order to compare the two performances and to determine whether the audience members could perceive the emotions, I relied on a quantitative research approach. The following section will discuss the different research approaches that were combined in this study to be able to analyse the raw data and to answer the research question.

5.2 Data Collection: Research approach and methodology

As mentioned in chapter one, this study is primarily placed in a qualitative research field and is accompanied by quantitative and practice-based research. To reiterate, qualitative research is more subjective in nature and involves "examining and reflecting on perceptions in order to gain an understanding of social and human activities" (Hussey & Hussey 1997:12). Essentially, this study draws from existing and accepted scholarly discourse to research emotion in order to gain an understanding of emotion and how it is perceived by humans. In order to fully understand the research pertaining to this study, a practice-based component had to be executed[190]. Practice-based research is an "original investigation undertaken in order to gain new knowledge partly by means of practice and the outcomes of that practice" (Candy 2006:3), which for the purpose of this study, was the performance that was choreographed and watched by the audience members.

To determine an answer to the investigative question, I had to draw on a quantitative research approach. According to Hussey and Hussey (1997:12), quantitative research is an objective approach that involves "collecting and analysing numerical data and applying statistical tests". This chapter specifically engages with the quantitative research that was done for this study. As mentioned in chapter one, in section 1.7.3.1, the mobile application was specifically

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[189] To reiterate, both performances consisted of the same choreography. The timing of the choreography and embodied emotions are different only due to the lack of musical cues.
[190] The practice-based research component was not marked, but merely served as a platform to gain data to analyse in order to contribute to the aim of the study.

designed as a tool to collect the data that were perceived by the audience in the practice-based component[191]. The following section will discuss how the mobile application operated and looked.

5.3 A Mobile Application for Data Collection

The mobile application was downloaded by the audience members using a URL[192]. The URL worked on all smartphones, including Android and Apple products.

The mobile application had a "start" tab, refer to figure one below, which was tapped by the audience member as the performance started. As soon as the audience tapped the "start" tab, on their mobile phones, they were given a "user number" by the application. This was designed in order for the audience members to remain as anonymous as possible when analysing and referring back to the data at a later stage.

There were three tabs on their screen: Fear, Anger, and Disgust. The audience tapped the emotion when they perceived the relevant emotions throughout the duration of the performance. The three emotions were repeated at different time intervals in the performance. Only the dancers and I knew when the emotions took place in the performance.

The audience members tapped the "end" tab as soon as the performance was over; refer to figure two below. The data of each user were anonymously saved by the mobile application on a separate data file that only I had access to.

Figure 1: Audience view of screen before performance commenced, 29/03/2019
Screengrab of Zelné Papenfus iPhone

Figure 2: Audience view of screen during performance, 29/03/2019
Screengrab of Zelné Papenfus iPhone

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[191] The practice-based component was discussed in chapter four.
[192] Universal Resource Locator. The URL was placed on the audiences seats upon walking into the theatre.

The mobile application recorded the time at which the emotion was distinguished by a specific user (audience member); refer to figure three below[193]. For instance, when the audience member opened the application and tapped the start tab, they were given a user number. This user then watched the performance and every time they recognised an emotion, such as anger or fear or disgust, they tapped the relevant tab on the screen. Using the user number/code that the application assigned to that specific user, the application automatically recorded the information as the user tapped a tab. After the performance, the different time allocations tapped by the audience members were readily available on a separate data file for me, as researcher to analyse. This provided more accurate and specific feedback than a regular questionnaire[194], as I could physically track the time at which one of the three emotions was tapped by the audience members on their mobile screen.

🔒 zpapenfus.com

Anger 00:00:01:695
Anger 00:00:02:799
Anger 00:00:04:343
Anger 00:00:04:503
Anger 00:00:05:532
Anger 00:00:05:691
Disgust 00:00:02:276
Disgust 00:00:04:923
Disgust 00:00:05:086
Fear 00:00:00:903
Fear 00:00:03:551
Fear 00:00:03:796
Fear 00:00:03:958
Fear 00:00:06:140
Fear 00:00:06:294

User: 2

Disgust 00:00:01:886
Disgust 00:00:02:070
Fear 00:00:00:654
Fear 00:00:00:805

User: 5

Disgust 00:00:03:925
Disgust 00:00:09:564
Fear 00:00:01:831
Fear 00:00:11:582

User: 15

Anger 00:00:04:037
Anger 00:00:05:660
Disgust 00:00:02:948
Disgust 00:00:03:204
Disgust 00:00:03:421
Disgust 00:00:06:764
Fear 00:00:01:164
Fear 00:00:04:651
Fear 00:00:04:837

(Clear Log)

Figure 3: Data file of researcher.
29/03/2019
Screengrab from Zelné Papenfus iPhone

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[193] This figure is merely a sample as given by the IT technician before the performance took place, and not taken from the data of the users (audience members) watching the performance.

[194] According to Hussey and Hussey (1997:161), a questionnaire "is a list of carefully constructed questions chosen after considerable testing, with the view to eliciting reliable responses from a chosen sample". Even though the aim of a questionnaire is to "find out what a selected group of participants do, think or feel" (Hussey & Hussey 1997:161), this type of data collecting would not have worked. There has not been enough testing on this particular topic to construct questions, and the audience members would not have remembered when in the performance the emotions were portrayed.

Timing of Performance One: 3 May 2019 (23 Audience members using the application)

The audience members were all regular theatre goers and understand the field of physical theatre

Time: Seconds - Minutes 10-second intervals / Emotions in order of appearance	0	10	20	30	40	50	60/1m
Fear 1			starts 26s			ends 51s	
Anger 1	starts 1:10		ends 1:26				
Disgust 1		ends 2:14					starts 1:55
Anger 2		starts 2:17		ends 2:30			
Fear 2		ends 3:12					starts 2:57
Disgust 2			starts 3:28		ends 3:50		
Anger 3	starts 4:00	ends 4:10					
Fear 3		starts 4:12	ends 4:28				
Disgust 3				starts 4:38			ends 4:52
Anger 4		starts 5:20		ends 5:31			
Anger 5	ends 6:07						starts 5:58
Fear 4		ends 7:19					starts 6:58
Fear 5				starts 7:39			ends 8:00
Disgust 4		ends 9:14		starts 8:32			
Anger 6		starts 9:16	ends 9:25				
Anger 7				starts 9:38	ends 9:46		
Fear 6	starts 10:00		ends 10:21				
Anger 8					starts 10:41		ends 10:55
Anger 9			starts 11:26		ends 11:42		
Fear 7	starts 12:04						ends 12:50

Overall 20 emotions were portrayed: Fear x 7; Anger x 9; and Disgust x 4 - It can be seen from the table above that the emotions were portrayed throughout the duration of the performances, in no specific order.

Table 5.1: Timing of performance one as observed by me, as choreographer.
08/09/2019
Graph designed by Zelné Papenfus

Timing of Performance Two: 4 May 2019 (18 Audience members using the application)

The audience members were not regular theatre goers and are not as familiar with the field of Physical Theatre.						
Time: Seconds - Minutes 10-second intervals **Emotions in order of appearance**	**0 10**	**20**	**30**	**40**	**50**	**60/1m**
Fear 1			starts 28s		ends 59s	
Anger 1		starts 1:15		ends 1:33		
Disgust 1	starts 2:00	ends 2:19				
Anger 2		starts 2:20		ends 2:32		
Fear 2	starts 3:04	ends 3:20				
Disgust 2				starts 3:37		ends 3:55
Anger 3	starts 4:07	ends 4:15				
Fear 3		starts 4:16	ends 4:29			
Disgust 3				starts 4:36		ends 4:54
Anger 4		starts 5:18	ends 5:28			
Anger 5						starts 5:57
	ends 6:10					
Fear 4	starts 7:05			ends 7:33		
Fear 5					starts 7:48	
	ends 8:06					
Disgust 4				starts 8:36		
		ends 9:17				
Anger 6		starts 9:20	ends 9:27			
Anger 7					starts 9:45	ends 9:54
Fear 6	starts 10:06		ends 10:29			
Anger 8					starts 10:50	
	ends 11:03					
Anger 9				starts 11:38		ends 11:54
Fear 7		starts 12:17				ends 12:57

Overall 20 emotions were portrayed: Fear x 7; Anger x 9; and Disgust x 4 - It can be seen from the table above that the emotions were portrayed throughout the duration of the performances, in no specific order.

Table 5.2: Timing of performance two as observed by me, as choreographer.
08/09/2019
Graph designed by Zelné Papenfus

Having discussed the mobile application and its purpose, the following section will discuss the data collection process in detail.

5.4 Collection Process

The performance was choreographed in such a way as to give the audience members a reasonable amount of time[195] to observe, process and tap the emotion on their screen, as it was portrayed by the dancers. The process of the data collecting went as follows:

1. The audience members, upon my request, took out their mobile devices;
2. They connected to the WIFI router I provided[196], if they did not want to use their own data and/or if the University of Pretoria's guest WIFI did not work. All the details for the WIFI router were printed on A4 pages that were placed on the audience members' chairs;
3. Trained first-year drama students[197] were on stand-by in case any of the audience members needed assistance with connecting to the wi-fi or accessing the application;
4. Once the audience members had logged onto the wifi, they were asked by me to access the URL that was also printed on the A4 page, in order to access the application;
5. Once logged onto the application, an anonymous user number/code was automatically given by the application to the audience members;
6. A test run was done before starting the actual performance to make sure the same number of users as audience members who were in the theatre, appeared on the separate data file I had to use to analyse the data from;
7. The audience was clearly instructed to press only the green start tab when I counted them in. They were also clearly guided on how to access the application, and how to get to the page that had the three emotion tabs and green start button. They were made aware of the fact that all the audience members had to simultaneously press the start tab;
8. Along with the green start tab, there were three tabs on their screens "fear, anger, and disgust" (see figures one and two above);

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[195] Many test runs were done before the performances, to ensure that the timing in which the emotions were portrayed was long enough.

[196] Unfortunately, the University of Pretoria's guest WIFI signal was not strong enough inside the Lier theatre where the performance took place. Most of the audience members used the WIFI router I provided.

[197] The first-year students were well informed of the process and had enough practice to assist the audience members.

9. They were made aware of the fact that the tabs are sensitive, and as they tapped the relevant tab, the tab would turn yellow for a brief second;

10. I counted the audience members in for the test run, starting from one up till three and then said "now", and the audience members were instructed to press the green start tab on the "now";

11. They were then instructed to tap Anger, Fear and Disgust after the count in;

12. The emotions were tapped with three-second intervals during the test run;

13. They were then instructed to press the red end tab on their screen;

14. I logged onto the separate data file to determine whether the application picked up all the users and all three of the emotions in the order the audience members were instructed to tap;

15. I then cleared the data file so that the application would give the members new anonymous user numbers/codes when they logged on the second time;

16. I asked the members to close the application and to type in the URL once again to access the application;

17. As soon as all the members were on the same page on the application, the dancers entered;

18. Before the performance commenced, the audience members were made aware of the fact that the emotions were not only portrayed once during the performance, but that all three emotions were portrayed more than once, throughout the performance at different time intervals;

19. The audience members were instructed to make sure that the tab turned yellow when it was tapped;

20. I then counted the audience members in from one up to three and said "now"; they pressed the start tab on "now" and the performance started.

At the end of the performance the audience members were reminded to press the red end tab, which concluded the data collecting process. After analysing the recorded raw data from the audience members on the data file[198] and comparing the time intervals, the audience members tapped on the application, to the timing of the emotions portrayed on the videos; a graph was formulated to calculate the findings. The following section will discuss how the use of basic

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[198] Refer to figure three for a visual example of the data file.

statistics made it possible to analyse the raw data that were collected and presented on a spread sheet.

5.5 The use of basic statistics in data analysis

Through the application of basic statistical techniques, I was able to analyse and interpret the raw data. According to Borovnik, Pilz, Schimek and Sommeregger (2018:32), "statistics lie at the heart of any type of quantitative reasoning necessary for making important advances in the … social sciences". After tabulating the data, the use of summary statistics called central tendency was used to measure the location of distribution (Module 5: Mode, Median and Mean [Sa]:61; Mean, Median and Mode 2003:1). This means that there is a single value "that best describes the centrality of the data" (Module 5: Mode, Median and Mean [Sa]:61). Three measures of central tendency that were incorporated in this study are: mean, median, and mode (Module 5: Mode, Median and Mean [Sa]:61).

The mean is usually called the "mathematical average", while mode and median are called "positional averages" (Unit-1 Frequency Distribution [Sa]:2). The mean "is the average score", which implies that the mean "is placed where the numerical distance of scores on one side of the mean balance the numerical distance of scores on the other side of the mean" (Module 5: Mode, Median and Mean [Sa]:68). In order to calculate the mean, all the data values must be added up (sum) and then the result is divided by the number of values (Mean, Median and Mode 2003:1). By calculating the mean, I was able to find the average number of times the users were able to perceive the three emotions.

The median, is another way "to measure the centre of a numerical data set" as the median is "the point at which there are an equal number of data points whose values lie above and below the median value" (Rumsey 2020:[sp]). Accordingly, the median is the value "of the variable which divides the group onto two equal parts one part comprising all values greater, and the other all values less than the median" (Unit-1 Frequency Distribution [Sa]:5). The middle score is therefore "the 50th percentile" (Module 5: Mode, Median and Mean [Sa]:63).

In order to calculate the median, the data must be "put in numerical order first"; ascending or descending order (Mean, Median and Mode 2003:1)[199]. After the numbers are in order, one needs to count in "from the lowest and highest scores" until the middle score is revealed (Module 5: Mode, Median and Mean [Sa]:63). If there is an even number, there will be two central numbers; therefore, the two central numbers need to be added and divided by two in order to get the true middle value (Unit-1 Frequency Distribution [Sa]:6). By calculating the median, I was able to find the true middle value of the audience members who could perceive the three different emotions as portrayed by the dancers.

The modal value "of a set of data is the most frequently occurring value" (Mean, Median and Mode 2003:2). The mode is, however, the "least stable of the three measures of central tendency" as it will vary the most from one sample to the next (Module 5: Mode, Median and Mean [Sa]:62). By calculating the modal value, I was able to interpret which emotion was perceived the most frequently by the users. The mode is therefore the "maximum ordinate of the ideal curve which gives the closest fit to the actual distribution" (Unit-1 Frequency Distribution [Sa]:8).

The range was also calculated as it is the simplest "measure of dispersion" (Unit-1 Frequency Distribution [Sa]:17). The range is thus the difference between the largest and least numbers in a data set (Mean, Median, Mode & Standard Deviation 2015:1). If the difference is small "then the series of numbers is supposed regular" and if the difference is large "then the series is supposed to be irregular" (Unit-1 Frequency Distribution [Sa]:17). To calculate the range, the largest number of the data set is subtracted from the smallest number of the data set. By calculating the range, I was able to interpret the difference between the perception of the three emotions and which emotion was the most difficult to perceive[200].

Tables 5.3, 5.4, 5.5 and 5.6[201], are tables that present all the information gathered from the data collection process. Table 5.3 holds the information from the first performance, the regular theatre goers, indicating the number of audience members who correctly perceived the emotions performed. Table 5.4 is a summary of the information presented in table 5.3. Table

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[199] If the data are not placed in order, the median will "reflect the arrangement of the numbers" rather than the actual middle number (Module 5: Mode, Median and Mean [Sa]:63).
[200] See the Tables 5.3 and 5.4 below (on the following page).
[201] Presented and discussed later in this chapter.

5.5 holds the information from the second performance, the non-regular theatre goers, indicating the number of audience members who correctly perceived the emotions performed. Table 5.6 is a summary of the information presented in table 5.5. Tables 5.3 and 5.5 include each user; how many times the user was able to perceive the emotions correctly, and the statistics of the perception of the three emotions. Tables 5.4 and 5.6 are summaries of the information presented in tables 5.3 and 5.5. The following section analyses the raw data collected in performance one.

5.5.1 Performance One: Data Analysis

Number of audience members who perceived the correct emotion at the given time (Performance One)

User number	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	Total	Mean	Median	Mode	Range
TOTAL Fear (portrayed 7 times)	7	5	3	5	2	4	4	6	3	6	7	3	6	3	3	3	5	4	3	5	2	5	7	101	4	4	3	5
TOTAL Anger (portrayed 9 times)	4	3	4	5	4	6	4	4	3	3	5	7	4	3	4	5	4	3	5	6	2	2	9	99	4	4	4	7
TOTAL Disgust (portrayed 4 times)	2	2	1	1	3	2	1	1	0	2	4	1	1	2	2	2	1	2	2	3	2	0	2	39	2	2	2	4
TOTAL Emotions Perceived	13	10	8	11	9	12	9	11	6	11	16	11	11	8	9	10	10	9	10	14	6	7	18					

Emotions in order of appearance (rows, all portrayed over the performance): Fear 1, Anger 1, Disgust 1, Anger 2, Fear 2, Disgust 2, Anger 3, Fear 3, Disgust 3, Anger 4, Anger 5, Fear 4, Fear 5, Disgust 4, Anger 6, Anger 7, Fear 6, Anger 8, Anger 9, Fear 7.

If the audience member observed/perceived the correct emotions at the correct time it was portrayed by the dancers there will be a ✓ in the box; if the audience did not observe/perceive the correct emotions at the correct time it was portrayed by the dancers there will be a x in the box.

Nine out of the 23 (39%) members perceived *less* than 50% of the three emotions that were portrayed (highlighted in blue).

Ten out of 23 (43%) members perceived between 50% and 60% of the three emotions that were portrayed (highlighted in purple).

Two out of 23 (9%) members perceived between 65% and 70% of the three emotions that were portrayed (highlighted in grey).

Two out of 23 (9%) members perceived between 80% and 90% of the three emotions that were portrayed (highlighted in oranje).

Table 5.3: Number of audience members who perceived the emotion performed correctly in performance one.
10/09/2019
Screen-grab of researcher's spread sheet.

Table 5.3 above presents the data collected by the mobile application during the first performance. As mentioned previously, the first performance consisted of invited audience members who are regular theatre goers.

Having discussed the definitions of the basic statistical techniques used in this study, the actual data will be provided and analysed accordingly, with reference to tables 5.3 and 5.4.

5.5.1.1 Mean: Performance one

With reference to table 5.3 the mean of the data is as follows:
- fear was perceived four out of seven times;
- anger was perceived four out of nine times; and,
- disgust was perceived two out of four times.

This indicates that fear was perceived more easily than anger and disgust.

5.5.1.2 Median: Performance one

Still referring to table 5.3, the data indicate that the median (true middle) was as follows:
- fear - four;
- anger - four; and,
- disgust - two.

This indicates that fear and anger were perceived only four times by most of the audience members, and that disgust was perceived only twice out of the four times it was portrayed. The data therefore indicate that anger was the most difficult to perceive out of the three emotions, as anger was the emotion that was portrayed the most throughout the duration of the performance.

5.5.1.3 Mode: Performance one

The modal values in table 5.3 indicate that:
- fear was most frequently perceived three times out of the seven times it was portrayed;

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- anger was most frequently perceived four times out of the nine times it was portrayed, and;

- disgust was most frequently perceived two out of the four times it was portrayed.

This indicates that fear is once again the emotion that was most easily perceived.

5.5.1.4 Range: Performance one

Moving to the range, which indicates that there is a difference:

- of five when users perceived fear;

- of seven when users perceived anger, and;

- of four when users perceived disgust.

This indicates that anger and disgust were the most difficult to perceive. The range between the emotions also indicate that there are individual differences, which relates back to emotion as being personally unique as discussed in chapter two[202].

5.5.1.5 Summary of Performance one

The ability of the audience members (users) to recognise some of the emotions indicate that there are also human congruent traits portrayed when expressing emotion, as discussed in chapter three[203].

Below is a summarised table, table 5.4, of the raw data that were collected. It can be observed that there were fluctuations in the number of audience members who accurately perceived and distinguished between fear and anger. With reference to Chapter three, Perveen, Gupta and Verma (2012:1), mention that the eyebrows form part of the major regions where facial expression is perceived. Therefore, it may be possible that the audience got mixed signals as the movements of the dancer's eyebrows got confused between emotions[204]. The perception of disgust, however, increased as the performance continued. It can be deduced from the data presented in the tables that the audience became confused between anger and fear. It is,

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[202] Refer to section 2.3
[203] Refer to section 3.2
[204] Refer to section 4.1.2.3

however, acknowledged that fear was the only emotion correctly perceived by all 23 audience members simultaneously the fourth time it was portrayed.
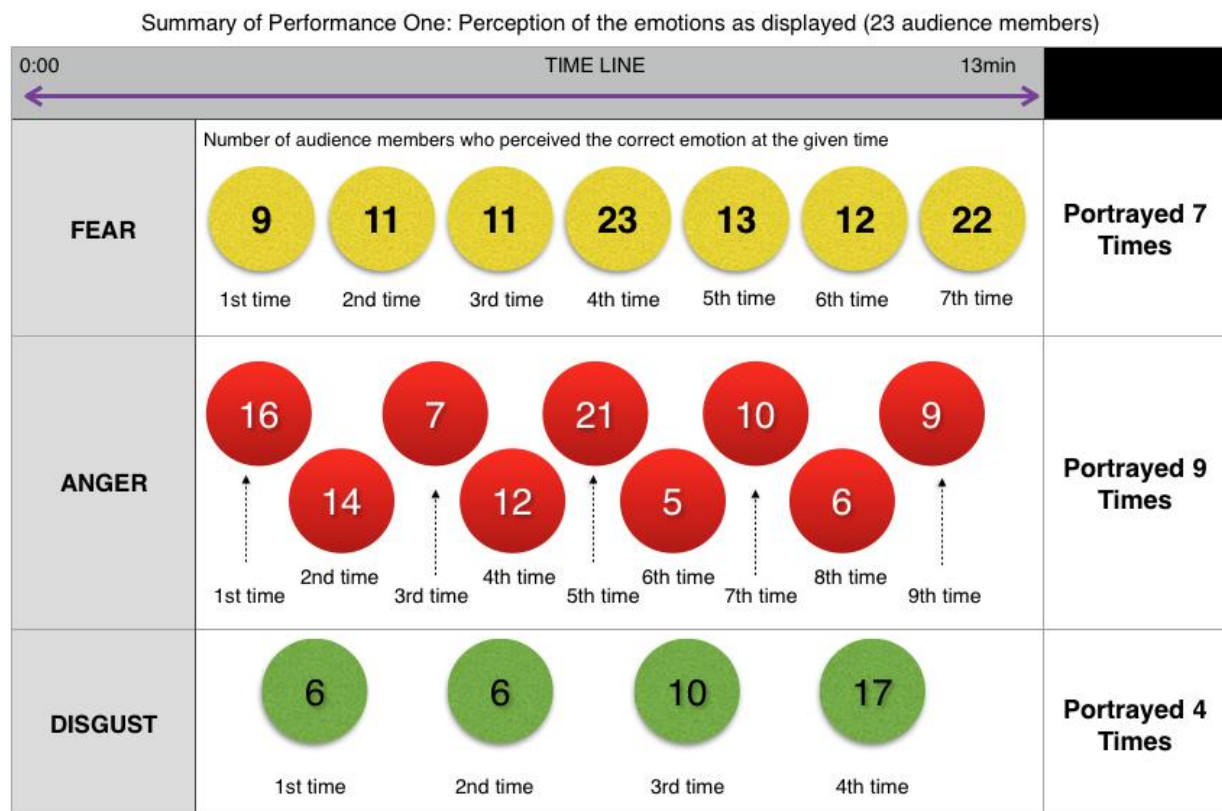
Table 5.4: Summarised table consisting of the number of audience members, in performance one, who perceived the portrayed emotion at the correct time interval.
10/09/2019

It is seen from the data presented in both tables above, table 5.3 and 5.4, that fear appears to be the emotion that was perceived the most often by the audience members in performance one. The next section provides and analyses the raw data collected during the second performance.

5.5.2 Performance Two: Data Analysis

Table 5.5 below presents the raw data collected in performance two, which was the performance attended by invited audience members who are less familiar with physical theatre and are not regular theatre goers.

Number of audience members who perceived the correct emotion at the given time (Performance Two)

User number	87	88	89	90	91	92	93	94	95	96	97	99	100	101	102	103	104	105					
	If the audience member observed/perceived the correct emotions at the correct time it was portrayed by the dancers there will be a ✓ in the box; if the audience did not observe/perceive the correct emotions at the correct time it was portrayed by the dancers there will be a x in the box.																						
Emotions in order of appearance																							
Fear 1	✓	x	x	✓	✓	✓	✓	✓	✓	✓	x	✓	x	x	x	x	x	x					
Anger 1	x	x	✓	x	x	✓	✓	✓	x	✓	x	x	x	x	x	x	x	x					
Disgust 1	x	✓	✓	✓	✓	✓	✓	✓	x	x	✓	x	x	✓	✓	x	x						
Anger 2	x	✓	x	x	x	x	✓	x	✓	x	x	x	✓	x	x	x							
Fear 2	✓	x	x	✓	x	x	✓	x	x	x	x	x	x	✓	x	x	✓	x					
Disgust 2	✓	✓	✓	x	x	✓	x	✓	✓	x	✓	x	✓	✓	x	✓							
Anger 3	✓	✓	✓	x	x	x	x	x	x	✓	x	x	x	✓	✓	x	x	x					
Fear 3	x	x	x	✓	✓	x	x	x	x	x	x	x	x	✓	x	x	✓	x					
Disgust 3	x	x	x	x	x	✓	x	✓	x	x	✓	x	x	x	✓	x	x	✓					
Anger 4	✓	x	✓	x	x	x	x	x	x	x	x	x	✓	x	x	✓	x	x					
Anger 5	✓	x	✓	✓	✓	✓	✓	✓	x	✓	x	x	x	✓	x	x	x	x					
Fear 4	x	x	x	✓	x	x	✓	x	x	✓	x	x	✓	x	✓	x	✓	x					
Fear 5	✓	x	x	x	x	x	x	✓	x	x	x	x	x	x	✓	x	x	x					
Disgust 4	✓	✓	✓	x	✓	✓	✓	x	✓	✓	x	x	✓	x	✓	✓	x	✓					
Anger 6	x	x	x	x	x	x	x	x	x	x	x	✓	✓	x	✓	x	x	x					
Anger 7	x	✓	✓	✓	x	✓	x	x	x	x	x	x	x	x	x	x	x	x					
Fear 6	✓	x	x	x	✓	x	✓	x	✓	x	x	x	x	x	✓	✓	x	x					
Anger 8	x	x	✓	x	x	✓	✓	✓	x	✓	x	x	✓	x	✓	x	x	x					
**(fear) Anger 9	✓	✓	x	✓	✓	x	x	x	x	x	x	✓	✓	✓	x	✓	x	x					
Fear 7	✓	✓	✓	✓	✓	x	✓	✓	✓	✓	✓	✓	✓	✓	✓	x	x	✓					
																			Total	**Mean**	**Median**	**Mode**	**Range**
TOTAL Fear (portrayed 7 times)	5	1	2	6	5	4	5	5	5	3	2	2	1	4	1	4	2	2	59	3	2.5	2 & 5	5
TOTAL Anger (portrayed 9 times)	5	2	6	2	2	3	5	4	0	3	2	2	1	6	3	3	0	0	49	3	2.5	2	6
TOTAL Disgust (portrayed 4 times)	2	3	3	1	2	3	3	2	3	3	1	2	2	1	3	3	0	3	40	2	2.5	3	3
TOTAL Emotions perceived	12	6	11	9	9	10	13	11	8	9	5	6	4	11	7	10	2	5					
	Eleven out of the 18 (61%) members perceived *less* than 50% of the three emotions that were portrayed (highlighted in blue).																						
	Six out of the 18 (33%) members perceived perceived between 50% and 60% of the three emotions that were portrayed (highlighted in purple).																						
	One out of 18 (6%) members perceived between 65% and 70% of the three emotions that were portrayed (highlighted in grey).																						

Table 5.5: Number of audience members who perceived
the emotion performed in performance two.
10/09/2019
Screen-grab of researcher's spread sheet.

5.5.2.1 Mean: Performance two

With reference to table 5.5, the mean indicates that:

- fear was perceived three out of the seven times;

- anger was perceived three out of the nine times; and,

- disgust was perceived two out of the four times.

This indicates that fear was, once again, perceived more easily than anger and disgust.

5.5.2.2 Median: Performance two

The data in table 5.5 indicate that the median (true middle) was as follows:

• fear - two point five;

• anger - two point five; and,

• disgust - two point five.

This in turn indicates that all three emotions were perceived 2.5 times by the audience members, yet anger was the emotion that was the most difficult to perceive as it was portrayed the most during the performance.

5.5.2.3 Mode: Performance two

The modal values in table 5.5 indicate that:

• fear was most frequently perceived between two and five times out of the seven times it was portrayed;

• anger was most frequently perceived two times out of the nine times it was portrayed; and,

• disgust was most frequently perceived three out of the four times it was portrayed.

This indicates that disgust was the most frequently perceived out of the three emotions.

5.5.2.4 Range: Performance two

The range indicates that there is a difference of:

• five when users perceived fear;

• six when users perceived anger; and,

• three when users perceived disgust.

This indicates that anger and disgust were, similar to performance one, the most difficult to perceive.

5.5.2.5 Summary of Performance two

Below is a summarised table, table 5.6, of the raw data that were collected in the second performance. It can be deduced that fear and anger[205] fluctuated in how many audience members perceived these two emotions. The perception of disgust, however, was perceived more often and accurately by the audience members. It is also acknowledged that fear had the highest number of audience members who perceived it simultaneously.

Seeing that the data that were collected from both performances were analysed separately in the sections discussed above, the data from both performances will be combined and compared in the sections to follow.

Table 5.6: Summarised table consisting of the number of audience members, in performance two, who perceived the portrayed emotion at the correct time interval. 10/09/2019

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[205] There are two possible reasons for the audience members fluctuation in perceiving fear and anger: 1. the breathing patterns for both emotions are not easy to sustain when dancing, and 2. the eyebrow movements might have confused the dancers and in turn the audience members.

5.5.3 Comparing and analysing the data from both performances
5.5.3.1 Combining the data from performance one and two

The table below, table 5.7, presents a summary of the data from both performances. This table also provides the percentages calculated from both performances as previously presented in table 5.3 and 5.5. The percentages were calculated by integrating the data from tables 5.3 and 5.5. It is implied that through the accumulation of the raw data from both performances, that it could possibly lead to further research and details regarding the three emotions[206].

Summary of Performance One and Two: Perception of emotion as portrayed (41 total audience members)

	TIME LINE	
0:00		13 min

Number of audience members who perceived the correct emotion at the given time

FEAR — 18 (1st time), 17 (2nd time), 16 (3rd time), 36 (4th time), 18 (5th time), 18 (6th time), 38 (7th time) — **Portrayed 7 Times**

ANGER — 21 (1st time), 19 (2nd time), 13 (3rd time), 18 (4th time), 28 (5th time), 7 (6th time), 14 (7th time), 12 (8th time), 16 (9th time) — **Portrayed 9 Times**

DISGUST — 17 (1st time), 18 (2nd time), 14 (3rd time), 30 (4th time) — **Portrayed 4 Times**

Performance One & Two: Total percentage of audience members who perceived all three emotions.

Percentage of audience members who perceived the emotions:
- 49% of the audience members perceived less than 50% of the emotions that were portrayed throughout the performance;
- 39% of the audience members perceived between 50% and 60% of emotions that were portrayed throughout the performance;
- 7% of the audience members perceived between 65% and 70% of emotions that were portrayed throughout the performance, and;
- 5% of the audience members perceived between 80% and 90% of emotions that were portrayed throughout the performance.

Total perception of the three emotions:
- fear was perceived by 17% of the audience members;
- anger perceived by 25% of the audience members, and;
- disgust perceived by 21% of the audience members.

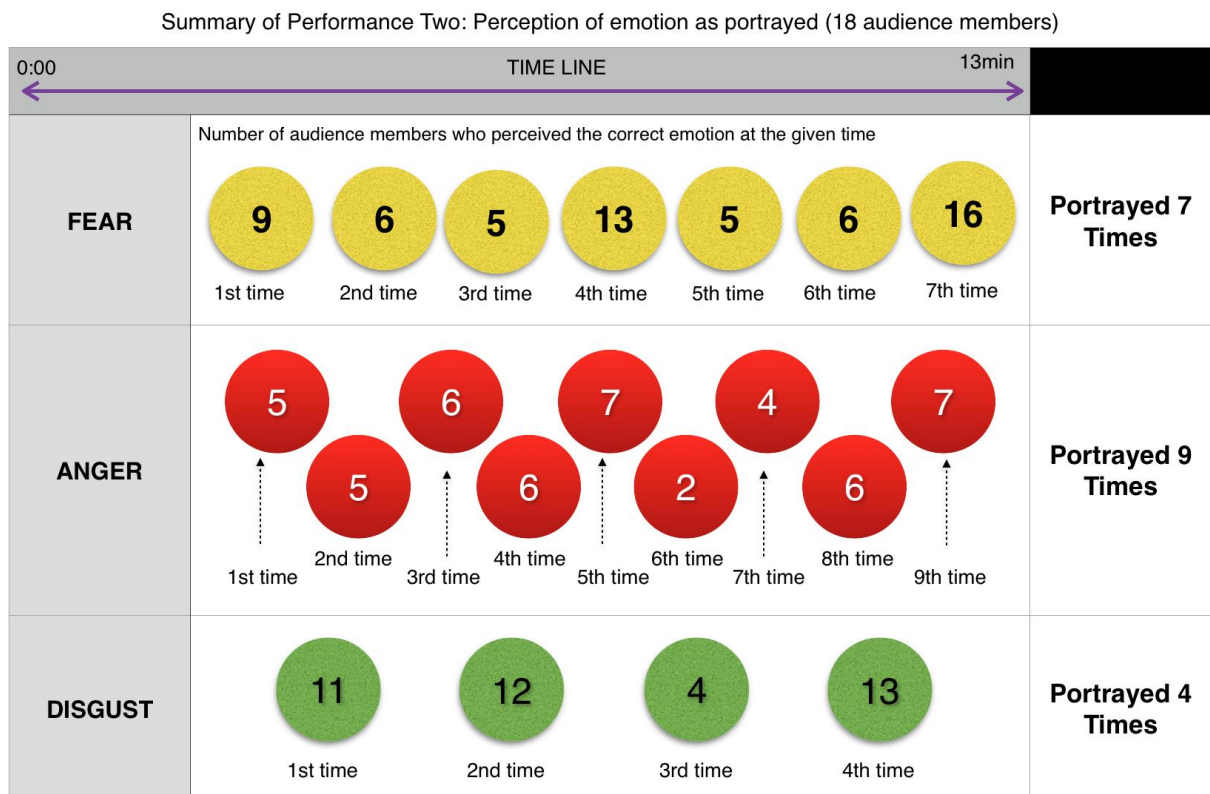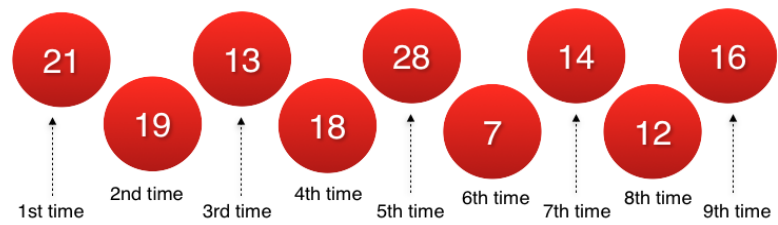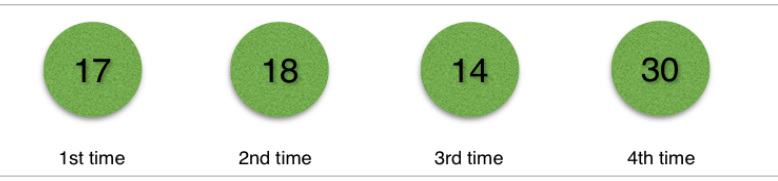Only 21% of the emotions were perceived by the audience members from both performances.

Table 5.7: Summarised table consisting of the number of audience members, combined in performance one and two, who perceived the portrayed emotion at the correct time interval. 07/03/2020

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[206] See section 5.6.5

5.5.3.2 Comparing performance one and two

When comparing the two performances it is observed from the data that were collected in tables 5.3 and 5.5, that from the audience members in the first performance:

- only two audience members perceived between 80 and 90 percent of the emotions that were portrayed;
- only two members of the audience perceived between 65 and 70 percent of the emotions that were portrayed;
- ten audience members perceived between 50 and 60 percent of the emotions; and,
- nine audience members perceived less than 50 percent of the emotions that were portrayed.

In the second performance:

- only one audience member perceived between 65 and 70 percent of the three emotions that were portrayed;
- six audience members perceived between 50 and 60 percent of the three emotions; and,
- eleven audience members perceived less than 50 percent of the emotions that were portrayed.

It is therefore implied that regular theatre goers[207] are more likely to perceive emotion portrayed on stage, even though the number of audience members who were able to perceive a relatively high percentage of the emotions is still low. From the collective data, it is deduced that audience members are able to perceive emotion in a physical theatre performance due to human congruence. The indication that not all of the emotions were perceived, highlight the notion that personal uniqueness has a significant impact on how emotion is perceived and interpreted.

Statistics were used in order to determine the number of audience members who could perceive the three emotions portrayed in the performances. The mean, median and mode were used in summarising and positioning the data that were collected. The range was used to determine how the different individuals perceive the emotions. In order to understand the

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[207] Theatre goers who are regularly exposed to Physical Theatre and experts in the field of theatre, dance, and performance studies.

quantitative data presented in the tables above, it has to be related to the qualitative research in chapter three.

5.6 Data interpretation based on scholarly discourse

With reference to what was discussed in chapter three regarding the perception of emotion, it is implied from the work of Yun, Deng and Hiscock (2009:3) that human congruence has a big effect on how emotion is expressed and perceived, especially when referring to the face. Yet, these authors also acknowledge that emotion can possibly be perceived more accurately if the expresser and the perceiver are from the same cultural background. This study did not take socio-cultural paradigms into account, and the audience members were perceived as South Africans who are: 1. regular theatre goers, familiar with physical theatre (performance one); and, 2. non-regular theatre goers, consisting of friends and family (performance two). This paves way for future research as it is possible that South African audiences cannot be perceived as a homogeneous group.

5.6.1 Human congruent emotive patterns with regard to interpreting the data

The human face is an "important source of social signals" (Sprengelmeyer & Jentzsch 2006:2899). The face reveals an individual's identity "and expresses, if not controlled, the inner feelings" of the individual (Sprengelmeyer & Jentzsch 2006:2899). Facial expressions differ in respect to the kind of emotion, and also to saliency, which refers to the intensity of the particular emotion portrayed (Sprengelmeyer & Jentzsch 2006:2900). This therefore implies that facial expression can create confusion if the intensity and expression of the emotion that is portrayed is misinterpreted.

Apart from the face, audience members also observe body motion and expression, as well as breathing patterns[208]. Owing to dance being an aesthetic and visual experience, the audience may associate with the movements and forms articulated by the dancers, which could have an effect on how emotion is experienced and perceived by the audience (Cross *et al*. 2011:6). It is thus implied that body expression is perceived as personally unique, as well as humanly congruent. In order to perceive an emotion the audience is aware of certain body attitudes and

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[208] See sections 3.2.1.2 and 3.2.1.3 in chapter three.

shapes which form part of emotion as humanly congruent. This said, personal uniqueness affects the way the attitudes and shapes of the body are interpreted by the perceiver. As mentioned in chapter four, there are habitual and characteristic patterns in the body that present information regarding emotion. A similar process is followed when observing breathing patterns associated with emotion.

As discussed in chapter three, Quinlivan (2014:4) states that sound and movement[209] accompanies the perception of the breathing pattern associated with the emotion. Even though the breathing patterns portrayed in all three emotions were vastly different and congruent, the interpretation of the breathing patterns by the audience members could still be influenced by the audience's personal uniqueness. The audience perception could also have been influenced by the dancers breathing as they needed more oxygen at certain intervals of the dance and could not always sustain the breathing patterns of the emotions precisely.

With reference to the human congruent emotive patterns the dancers rehearsed and embodied, as discussed in chapter four, the audience members were exposed to the expressed emotions as explained by scholarship. It is, however, acknowledged that fear and anger involve highly tense musculature, which could possibly have had an influence on how the audience perceived these two emotions[210]. Nummenmaa, Glerean, Hari and Hietanen (2014:646) state that emotions are often perceived directly in the body, which implies that observed emotions are not necessarily consciously engaged with. Nummenmaa *et al*. (2014:646) further propose that emotions are "associated with culturally universal, topographically distinct bodily sensation that may support the categorical experience of different emotions". It is therefore implied that the different emotions have specific congruent physiological patterns. Yet, cultural backgrounds do, as discussed above, have an influence on how the patterns are expressed and perceived. According to Yang and Banissy (2017:3), difficulties with emotion perception are "associated with specific types of social impairment, including poor interpersonal interaction, reduced social competence, loneliness, and inappropriate social behaviours".

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[209] Movement in the chest and stomach.
[210] There are, however, distinct, and clear differences in gestures, spatial orientation and shaping of the chest, torso, head, neck, shoulders, legs, and feet regarding these two emotions (anger and fear).

Having briefly referred back to the scholarly discourse engaged with in chapter three on the perception of emotion, it is valuable to understand why fear was perceived more accurately than anger and disgust and why anger was the emotion that was perceived the least. Furthermore, it is acknowledged that the audience, similar to the dancers had trouble distinguishing between anger and fear. This might be due to the confusion in the breathing pattern of anger and fear due to the difficulty in sustaining the cycles of inhalation and exhalation; as well as the eyebrow/forehead movements in the facial pattern, as mentioned above and in chapter four (refer to footnotes in the tables in 4.1.2.3).

5.6.2 Fear

Fear, according to Koskela (2010:389), "does not take place through an individual's own experience, but through the experience of the others, circulated either in face-to-face conversation or in the media". Implying that fear is a personal emotion which "both reflects social relations and has an influence on them"; therefore fear can be socially triggered and produced despite being a 'personal' emotion (Koskela 2010:389). This indicates that fear is more likely to be perceived within a social setting[211]. Fear[212], when referring to chapter two, is also about survival as suggested in the discussions on the triune brain[213].

5.6.3 Anger

Unlike fear, anger is characterised by "appraisals of certainty and control" which is associated "with feeling invulnerable" (Lemay, Overall & Clark 2012:984). Anger therefore encourages "reliance on relatively automatic, superficial, and heuristic thought processes" which motivate quick action (Lemay *et al*. 2012:984). It is as such, implied that anger promotes irrational actions; thus, angry victims "are unlikely to keep in mind their own dependence on perpetrators or to carefully consider the effects of their actions on the welfare of the relationship" (Lemay *et al*. 2012:984).

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[211] Koskela (2010:389) indicates that the consequences of fear often take spatial form, therefore fear contributes to the social shaping of space. It is implied that fearful movements are thus easily observed and often cause the witnesses to become fearful. This can be due to the survival instinct.

[212] It is noted that there are two types of fear: active and passive. This falls outside the scope of this study.

[213] See section 2.2 in chapter two.

Accordingly, anger is also characterised by the urge "to change the situation by fighting, harming, or conquering an opponent" (Lemay *et al*. 2012:984). It can be deduced from the information provided, that anger can be perceived as an emotion that is destructive and critical. In general, anger can be perceived as a 'negative emotion' and is possibly not accepted in some socio-cultural backgrounds. With reference to what was previously discussed in chapter two[214], anger is one of the emotions that is deemed as inappropriate in a social setting in my personal socio-cultural paradigm. As a result, anger can be portrayed and expressed in many different ways, making it more difficult to perceive by individuals due to their personal uniqueness.

5.6.4 Disgust

With regard to disgust, it is suggested by Cisler, Olatunji and Lohr (2009:219) that there is a strong correlation with the emotion of contamination fear, blood-induced-injury fear, spider fear and specific anxiety disorders. It is further suggested that disgust influences anxiety, which can "add considerable explanatory power to the growing theory of disgust in anxiety" as disgust is "epiphenomenal [215] to fear in disgust-related anxiety disorders" (Cisler, Olatunji & Lohr 2009:219). From the information provided, it is evident that disgust can potentially be confused with fear. This may possibly explain why some audience members did not perceive disgust, but perceived fear instead.

5.6.5 Final conclusions regarding the perception of the three emotions

Taking all of the above discussions into consideration, it can be concluded that the three emotions are not easily distinguished, which makes it difficult for audience members to perceive the intended emotion in the performance. With reference to the general perception of all the emotions that were portrayed in the performance, it is concluded that only:

- 61% of the audience members from the first performance could perceive more than 50% of the emotions that were portrayed[216].

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[214] See section 2.4 in chapter two.
[215] Epiphenomenalism "is the view that mental events are caused by physical events in the brain, but have no effects upon any physical events" (Stanford Encyclopaedia of Philosophy Epiphenomenalism 2019:[Sa]). This statement implies that there could be neurological patterns and hormones secreted in the brain due to an event that has been witnessed by an individual, and they may feel a certain emotion but they do not portray it or react to the event that has taken place.
[216] Refer to table 5.8.

- 61% of the audience members from the second performance perceived less than 50% of the emotions that were portrayed[217], which implies that only 39% of the audience members, in performance two, could perceive more than 50% of the emotions.

Performance One: Regular theatre goers

61%	39%
61% of the audience could perceive > 50% of emotions portrayed	
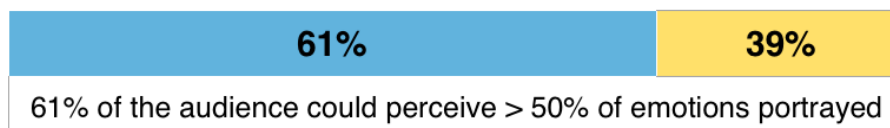
Table 5.8: Results of Performance One.
2020/02/18

Table 5.8 presents the number of audience members able to perceive more than 50% of the emotions that were portrayed throughout the duration of the performance. This further indicates that 39% of the audience members perceived less than 50% of the emotions. It is therefore implied that regular theatre goers are predisposed to perceiving emotion and narrative in physical theatre. It is further suggested that the intensity of the emotions portrayed also have an effect on how they are perceived by the audience, which means that the choreography could possibly have an effect on the perception of the emotions by the audience members.

Performance Two: Audience members not as familiar with physical theatre

39%	61%
61% of the audience perceived < 50% of the emotions portrayed	

Table 5.9: Results of Performance Two.
2020/02/18

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[217] Refer to table 5.9.

Table 5.9 presents the number of audience members who perceived less than 50% of the emotions that were portrayed throughout the duration of the performance. This further indicates that only 39% of the audience members perceived more than 50% of the emotions.

Audiences combined (considering groups simulateously)

51%	49%
51% of the audience perceived > 50% of the emotions portrayed	
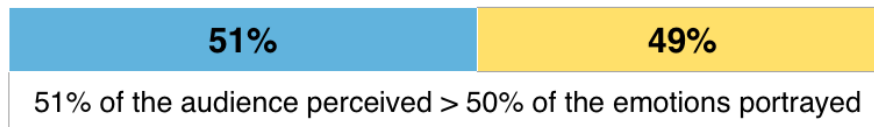
Table 5.10: Results from Performance
One and Two combined.
2020/02/18

Table 5.10 presents the weighted average and the number of audience members able to perceive more than 50% of the emotions that were portrayed throughout the duration of the performance. This further indicates that 49% of the audience members perceived less than 50% of the emotions.

If one combined the two groups of audience members to get a weighted average, the data indicate that 51% of the audience members could perceive more than 50% of all the emotions that were portrayed throughout the duration of the performance[218]. This outcome is possibly indicative of the fact that both human congruence and personal uniqueness have an impact on how emotions are perceived in physical theatre; further research is however necessary. Such research possibilities will be expanded upon in the next chapter that concludes this study.

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[218] Refer to table 5.10.

CHAPTER SIX: SUMMATION AND CONCLUSION

6.1 Introduction

This aim of this chapter is to summarise the knowledge, practices and approaches that have emerged in the preceding chapters. The research objective will be revisited, highlighting the findings, applications and limitations pertaining to this study. Transferability of the process and findings of this study will be provided. The shortfalls of this study will also be discussed, indicating further research possibilities that stem from this study and a conclusion will be drawn.

6.2 Overview of the study

The field of this study is physical theatre, as discussed in chapter one, is referred to as a "catch all phrase" due to its integration of various movement-based theatre forms (Callery 2006:1). Physical theatre focuses on physicality and the visual forms and shapes performers create with their bodies in portraying a character and narrative (Sanchez-Coleberg 1996:40). Verbal language is not always incorporated in physical theatre performances; therefore this type of theatre relies on the relationship between observation and experience. As such, choreographers create physical theatre performances with the intention of stimulating a response from the audience. As indicated in section 1.7.2 and 4.2, the intention of the performance choreographed for this study was for the audience to perceive three different emotions, whilst reflecting on the concept of time, and more specifically of being stuck in traffic.

Owing to the influence certain dance styles, such as Ballet and Contemporary dance, have on my style of choreographing physical theatre (see section 1.8.1), this study was placed in the area of dance-based physical theatre. Dance-based physical theatre is therefore a variation of physical theatre that acknowledges and incorporates previously learnt dance techniques into physical theatre, thus emphasising the personal contribution that each choreographer and/or performer brings to the process and performance (see section 1.2). According to Jackson (2005:29), all performers and choreographers have the ideal body for their own dance and their dance defines their own body. This implies that each individual presents a unique range of body movements and dance techniques to express their emotional states and experiences. Most performers enter the performance space wanting to express "motion that is both personal and traditional" (Jackson 2005:25). Dance-based physical theatre is the ideal platform for

choreographers and performers to be able to express both personal and technical aspects[219]. As previously discussed in section 1.2, dance-based physical theatre does not fully rely on the technical demands of the specific dance styles, such as Ballet and Contemporary dance, but is not without the techniques that have been previously placed in the body either.

For the purpose of this study, three emotions, namely anger, fear and disgust were embodied in the performance, which contributed to the narrative and context of the performance. The use of the embodiment of emotion draws from my previous research project, where emotions were embodied in the choreography to possibly enhance the quality of dance-based physical theatre. By enhancing the quality of dance-based physical theatre, audience members are more likely to understand and relate to the performance.

The problem statement for this study questioned whether audience members understand and perceive the choreography, as well as the intended meaning of the performance. Perceiving emotions accurately assists in one's understanding of emotional intent and further enables one to react appropriately in given situations (Gomes 2017:37). It is further implied that audience members watch performances for entertainment, therefore the performances are easily forgotten. As choreographer, one intends to create a performance that will have an impact during and after the performance was watched by the audience members. In order to determine whether audience members are able to distinguish between the intended emotions, a dance-based physical theatre performance had to be choreographed and performed.

Before I was able to choreograph a performance, in-depth research on emotion took place. Chapter two defined emotion as the body's need for change in order to survive (Bond 2017:4). Emotions were also defined as the driving force of making decisions (see section 2 in chapter two), which indicate meaning and feeling in the bodymind (Leavitt 1996:514). Chapter two also discussed two primary scholarly discourses relating to how humans perceive emotions in themselves and in others, which included: 1. Emotion as humanly congruent (see section 2.2); and 2. Emotion and personally unique (see section 2.3). As discussed in section 2.2, emotion as humanly congruent suggests that emotions are perceived and expressed similarly among humans from different socio-cultural backgrounds (Roether *et al*. 2009:1). Emotions as

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[219] Taking into account that physical theatre includes a range of discourses that are both technical and personal as discussed in chapter one and four.

personally unique, as discussed in section 2.3, suggest that individual and cultural differences also play a vital role in the interpretation and perception of emotions (Masuda *et al*. 2008:378).

The notion of ur-emotions was engaged with in section 2.1, replacing the concept of basic emotions. Ur-emotions refer to distinct characteristics that belong to a specific emotional state, thus making it possible for humans to distinguish between different emotions (Ekman & Cordaro 2011:365). According to Frijda and Parrot (2011:406), the ur-emotions include: happiness, surprise, anger, fear, disgust and sadness[220]. These ur-emotions have basic emotive patterns that make them universally recognisable. Apart from the emotive patterns, the ur-emotions involve specific organ function and hormonal secretion. MacLean's (1988:[sp]) triune brain theory and how the theory implies that there are humanly congruent structures in the brain that inform emotion and survival was explicated in section 2.2 with regard to emotion as humanly congruent. This led to discussing the various areas involved in generating emotion in the brain and how these areas function when emotions are expressed[221].

Although the human body is suggested to initially share the same basic biological components, the surroundings in which humans are placed also affect how emotions are portrayed and perceived (Bond 2017:xi)[222]. This leads to the critical reflection of how emotions are personally unique, suggesting that each emotion is experienced in a different context based on the individual's lived experience. This brought me to discussing why I chose the three emotions presented in this study. Expressing anger, fear and/or disgust are deemed as socially inappropriate as an Afrikaans female. Womanhood and the concept of "ordentlikheid" (Van der Westhuizen 2017:8) was briefly engaged with (see section 2.4) in relation as to why these emotions are not often portrayed, and why I was curious to centre my exploration on them.

Section 2.5 is a discussion on the elements of the effector patterns associated with all three emotions. The effector patterns involve physiological changes made by the performer to embody an emotion (Rix 2001:209). The changes are made in breathing patterns, body attitude and orientation, and facial trait/expression. The effector patterns are drawn from the findings of Susana Bloch (2015:[sp]). Disgust does, however, not form part of Bloch's basic six emotions. Other discourses were incorporated in order to facilitate the embodiment of the emotions, such as EP, LMS and LK.

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[220] Section 2.1
[221] Section 2.2
[222] Section 2.3

Chapter three addressed the perception of emotion in general (refer to section 3.1), as well as how audience members perceive emotions (see section 3.2). As such, section 3.1 discusses the four expressive domains through which humans perceive emotion; the four domains include: facial expressions (see section 3.1.1); body attitude (see section 3.1.2); breathing patterns (see section 3.1.3); and voice and speech (see section 3.1.4). Section 3.2 discussed how audience members perceive emotion in performances through observing the four domains. Furthermore, section 3.2 discussed how aesthetic responses and adequate perception of stage performances could elevate cognition and emotions in audience members (Nair 2007:21). The connection between humans as audience members is discussed in section 3.2.1, where animated characters are discussed in relation to how emotions are perceived by audience members. The four domains are integrated into the discussions of how audience members perceive emotions in performances (see sections 3.2.1.1 - 3.2.1.4).

As discussed in section 3.1.4.1, music has the ability to trigger emotion in its listeners (Droit-Volet *et al*. 2013:1). Owing to this reason, music was not incorporated in the performances in this study. Music has the ability to enhance emotional experiences for audience members, which is what this study had to avoid, in order to determine whether emotions can be perceived purely through observing the body in performance.

Chapter four discussed the choreography and the choreographic process leading to the performances. The choreographic process, as discussed in section 4.2, includes choreography in general and how the performance was choreographed, which includes: finding a source and beginning the choreographic process (see section 4.2.2); devising movement and generating a narrative from the source (see section 4.2.3); the performer's role in the choreography (see section 4.2.2); the active process perceived by me as choreographer (see section 4.2.5); the spatial designs and scenic devices incorporated into the performance, which includes the couch (see section 4.2.6); forming and shaping the choreography with intended emotions (see section 4.2.7); music and sound in the choreographic process (see section 4.2.8); and refining the choreographic choices.

This chapter also expanded on the approaches that were used to facilitate the de-roling process (see section 4.1.1) and the embodiment of the emotions (refer to section 4.1.2.3). There were three approaches: EP, LMS and LK that comprised the 'three strategies' (see section 4.1.2) that were used to facilitate the de-roling process and the embodiment of the emotions. EP, as discussed in section 4.1, stems from Bloch and Bond's work, drawing on the

Alba Emoting technique that allows performers to embody emotions by making only physiological changes and shifts in the body, face, and breath. Effort Factors and Elements, as well as the Shape category from LMS (see section 4.1.2.1), and the body NRG's from LK (see section 4.1.2.2) were incorporated into the facilitation of the EP.

Effort Factors and Elements were incorporated into describing "how" movement is executed (see section 4.1.2.1.1), and the Shape category described the form and shaping processes involved in the body (see section 4.1.2.1.2). LMS provided me, as choreographer, with vital terms in describing how the body should move in space and the shape it should take on when embodying an emotion. The body NRG's, Buoyancy, Radiancy and Potency, from LK (see section 4.1.2.2.1) influenced the quality of the movements and assisted the dancers in sustaining their energy when embodying the emotions.

Various accepted scholarly discourses were incorporated into the discussion of the three strategies in the tables, as displayed in section 4.1.2.3. The three emotions and how they were perceived as personally unique were also discussed in section 4.1.3. Section 4.1.3 specifically relates to how the emotions were observed by me, as choreographer, on the bodies of the performers, and how each of the dancers had slight differences in their embodiment of the emotions, even when following the three strategies.

This study integrated the three emotions into a live performance to determine whether the audience members were able to perceive and distinguish between the intended emotions. Through the use of three strategies, the dancers were able to embody the emotions during the performance. The audience members actively observed the emotions during the performance and recorded those they perceived at a given time on the mobile application, as discussed in chapter five.

Chapter five provided the time line of the emotions that were portrayed in the two performances (see section 5.1), as well as the raw data that was collected during the two performances by the mobile application specifically designed for this study. The mobile application and the collection process were thoroughly discussed (see sections 5.3 and 5.4). The raw data was analysed and a critical engagement with various outcomes was shared (see sections 5.5.1 and 5.5.2) using various tables and graphs. Drawing on quantitative research, the use of basic statistics was incorporated in order to analyse the raw data (see section 5.5). It was deduced from the raw data that were collected that fear was perceived the most accurately of the three

emotions (refer to section 5.6.5). It was further suggested that fear, unlike disgust and anger, is more likely to be a socially produced emotion; therefore, it is perceived the most accurately[223] (see section 5.6.1). It was further acknowledged that the dancers had difficulty sustaining the breathing patterns for the three emotions due to the high demand of energy needed to execute the movements in dance. This could possibly have affected the audience perception of the specific emotions.

It was also observed that regular theatre goers are predisposed to perceiving emotion and narrative in physical theatre (see section 5.6.5). Overall, 61% of the regular theatre goers perceived more than 50% of the emotions that were portrayed throughout the performance. However, 61% of the audience members who are not regular theatre goers perceived less than 50% of the emotions that were portrayed throughout the duration of the performance.

The analysed data project that 51% of all the audience members could perceive more than 50% (weighted average) of the emotions (see section 5.6.5). This indicates that emotions are humanly congruent, yet personal uniqueness also plays a vital role in the perception of emotion and meaning. It was further observed that regular theatre goers are more likely to perceive emotions in a dance-based physical theatre performance than audience members who do not go to the theatre regularly.

6.2.1 Transferability

With reference to the summation provided above, the following section will discuss the transferability of this study. For instance, section 3.2 discussed audience perception of emotion, which includes what the audience expects from a performance. With reference to what was discussed in section 3.2, the audience members expect an authentic and absorbing experience that trigger emotions (Radbourne *et al*. 2009:18). This expectation implies that performances have to be relatable and relevant in order for the audience to empathise with the intended context presented to them. Bushman (2002:724), as discussed in section 3.2, suggests that the perception of certain emotions presented in a performance may prompt the audience to release an emotional build up, which is known as a cathartic experience.

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[223] As mentioned, my lack of practical experience in facilitating the Emotional Effector Patterns may have allowed micro errors in the embodiment of the three emotions. As a result, this may have had an impact on how the emotions were perceived by the audience members.

The cathartic experience in turn, leads to a more accurate learning and decision-making process (Solbakk 2006:141), which is what choreographers seek when creating a performance (see section 3.2). In order for the audience to have a cathartic experience, emotions need to be displayed more effectively in dance-based physical theatre performances (see section 1.4). This study possibly presents strategies that could be integrated by other choreographers in facilitating the embodiment of emotions in dance-based physical theatre and potentially enhance the audience's perception of emotions and narrative in dance-based physical theatre.

As discussed in section 3.2.1 and in the summation, there are four domains through which emotions are observed by humans, and these four domains[224] allow audience members to understand and relate to the characters and the narrative presented in a performance. Through in-depth qualitative research, I was able to study the four domains through which emotions are perceived (see section 3.2.1), as well as develop three strategies that are informed by accepted scholarly discourses and approaches to facilitate the embodiment of emotions (see section 4.1.2.3). I was able to observe whether the three strategies are reliable in clarifying the shifts in four domains through which emotions are perceived. The practice-based component is where I facilitated the dancers in the rehearsal process prior to and in preparation for the performances (see section 4.1.3).

As discussed in section 4.1.3, personal uniqueness has an effect on the embodiment of the three emotions, even when the three strategies are followed precisely. I therefore had to rely on quantitative research (see sections 5.5.1 and 5.5.2), where basic statistics were applied in order to determine whether emotions can be perceived and distinguished in a dance-based physical theatre performance, where the four domains through which emotions are perceived are considered. In order to apply quantitative research, I had to develop a tool, the mobile application, to collect the data, which were the emotions as perceived by the audience members throughout the duration of the performance (see section 5.3).

The tool along with the data analysis through integrating quantitative research, projected that the three strategies could be integrated into dance-based physical theatre. By integrating the three strategies, choreographers may be able to facilitate performers to make clearer and more accurate shifts in the four domains through which emotions are perceived. This in turn, allows

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[224] As discussed in chapter three, the four domains through which emotions are perceived are: facial expressions; body attitude; breathing patterns; and voice and speech.

for the audience members to better perceive emotion, which possibly creates a better understanding of the performance.

It is observed that qualitative research informed the explanations and understanding of the quantitative research and vice versa. The main outcome of this study would not have been possible without the practice-based component. This study and the approaches that were incorporated can be duplicated by other choreographers by integrating the three strategies to embody emotion into their choreographic processes. This can potentially enrich the field of physical theatre by enhancing the audience perception of emotion and narrative portrayed in physical theatre performances. The three research approaches combined presented a well-rounded study. Nevertheless, there were shortfalls in this study as discussed in the section below.

6.3 Shortfalls of this study

This study involved South African audience members who are 1. Regular theatre goers and, 2. Non-regular theatre goers. There were certain aspects that can be considered as shortfalls of this study and as such, it is necessary to discuss the role socio-cultural backgrounds play in the perception of emotion, with specific reference to the South African cultural context.

6.3.1 Cultural influence on the perception of emotion

Since South Africa is a multi-cultural country, South Africans are culturally diverse. South Africa, according to Johnston (2015:376), is culturally, linguistically and ethnically diverse; embracing many cultures, as well as eleven official languages. According to Myambo (2010:94) and McAllister (1997:60), South Africa's multi-cultural population is referred to as the 'Rainbow Nation'[225]. This term is often employed as a way of unifying people, with an emphasis on national unity, whilst recognising cultural difference and acknowledging its value. Through the recognition and acknowledgement of cultural difference, South Africans connect and share a bond, which links to the philosophy of *Ubuntu*.

The term *Ubuntu* is the underlying social philosophy of African culture and describes the world-view of African societies, as well as the perceptions that influence social conduct (Mokgoro 1998:2; Nussbaum 2003:1). Bolden (2014:2) states that the frequent articulation of the term is

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[225] This term originates from Thabo Mbeki and is problematic within politics. This term is mentioned and defined to acknowledge diversity.

"I am because we are", means that a person cannot be "detached from the social context". *Ubuntu*, according to Molefe and Magam (2019:1), offers "an African moral perspective on issues" and a "plausible vision of a good society". Nussbaum (2003:2) states that "*Ubuntu* is consciousness of our natural desire to affirm our fellow human beings and to work and act towards each other with the communal good in the forefront of our minds". *Ubuntu* captures the essence of South Africa's multiculturalism and the importance of unity.

In light of this multi-cultural context, cultural intelligence plays a vital role in how culture is understood. Jonck (2015:78) states that cultural intelligence demonstrates the ability to interact with other individuals from diverse cultures, whilst gaining information about that culture and making gradual shifts to adjust one's behaviour in a sympathetic manner. As a result, cultural intelligence requires a great sense of emotional intelligence. Seglow (2003:167-158) states that multiculturalism is the central feature of the world and that it cannot be ignored. Similarly, Johnston (2015:376) explains that culture[226] plays a vital role in shaping the development of human behaviour and mental processes.

Nisbett and Miyamoto (2005:467) however, suggest that perception cannot be regarded as culturally diverse at all times. It is believed that Western cultures tend to engage in "content-independent and analytic perceptional processes" by focusing on notable objects or persons without paying attention to the environmental context; whereas East Asians focus on the relationships and the environment in which it takes place, holistically (Nisbett & Miyamoto 2005:467). The different perceptions as described by Nisbett and Miyamoto (2005:467) suggest an important relation to how emotions could be perceived by different people cross-culturally. It is understood that cultures which focus on independent structures of perception are concerned with their own goals and will not be overly constrained by other people's demands and needs. It is also implied that cultures which rely on inter-dependent structures of perception focus on their relationship with other people and the context they are placed in, which makes for well-rounded and respectful interaction.

With reference to the above stated, Jonck (2015:80) explains that "individuals from diverse cultures with differing norms interact and maintain different emotions". Thomas (2006:80), asserts that cultural influences determine the external expression of emotion and how emotion

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[226] Jonck (2015:78) articulates that culture provides individuals with a common group and differentiates them from other groups. An individual's attitude, values and beliefs stem from their culture and affects how individuals interact and react in social situations.

is perceived. The perception of emotion, according to Rossouw (2008:61), relies on the ability to reflect on the personal experience of emotion and the interpretation of the external emotional cues.

Taking the above information into consideration, it is implied that not taking the cultural backgrounds of the audience members into consideration, is a shortfall of this study. This shortfall does however create a possibility for further research on the perception of emotion in physical theatre. Another possible shortfall includes the emotions that were portrayed in this study. The section below expands upon this shortfall.

6.3.2 Emotions portrayed

Not all three emotions were performed the same number of times, and were not performed over the same length of time during the performance. Disgust was the emotion that was portrayed the least number of times, while anger was portrayed the most. As a result, the raw data that were collected and analysed may not be as accurate as they would have been if all the emotions were portrayed the same number of times. For instance, all three emotions: anger, fear and disgust, could be portrayed five times each, in a randomised order.

All three emotions were portrayed for 10-20 second intervals. Future studies could possibly consider making the time intervals longer and more precise by adding a specific soundscape with sound cues and other ur-emotions. Other ur-emotions, as discussed in section 2.1 include: sadness, surprise, happiness, and erotic love.

The breathing patterns for the three emotions were not sustainable as dance demanded a higher volume of oxygen to execute the movement. Therefore, the breathing patterns might have been misinterpreted by the audience members. Hence, the audience might have confused the three emotions. Further studies could include emotion in stillness or intervals where the dancers are not dancing to add to the narrative instead of having the dancers embody the emotion while dancing.

As researcher I did not have extensive practical training in facilitating the Emotional Effector Patterns. I purely relied on my research pertaining to published and accepted scholarly

discourses to facilitate the three emotions[227]. As a result, there might have been some errors made in the manner of introducing the patterns to the dancers. In turn, this could have had an impact on the audience perception of the three emotions in the performance. I do, however, plan on further training in all three approaches (EP, LK, and LMS) for future studies and application of the approaches.

Apart from the facilitation of the three emotions, further research could have been done and discussed regarding existing discourses on emotion in dance, theatre and performance studies, such as Cvejic's (2015) discussions on emotionalism in contemporary Western theatre dance. This further expands to the notion of expressionism and many connecting fields such as Bleeker's (2008) theory of 'visuality', as a mode of looking, in theatre.

This study argues that emotion enhances the perception of the emotional intent of the choreographer, thereby creating context paving a deeper understanding of the narrative of the performance. However, many forms of dance, performance and physical theatre emphasise the affective journey of the audience. As such, the meaning of the performance deliberately remains ambiguous. In the case of arguing otherwise, as this study does, the inclusion of a case study is needed as proof.

6.3.3 Journaling of the dancers

This study did not include the journal entries of the dancers, which possibly held valuable information regarding the embodiment of the emotions, as well as the affect the soundscape had on their embodiment of the emotions. If this study were to include the journal entries, it might have given the reader more insight into the embodiment of the effector patterns, as well as the choreographic process.

6.3.4 Audience members and location of the performance

This study required only 20 audience members to make the data viable and reliable. The data could, however, be more informative if more audience members were included in both

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[227] All the published and accepted scholarly discourses hold exact steps on how to safely embody the emotional effector patterns. These books and article are available online and in books stores to the general public.

performances. In order to attract more South African audience members, the performance could have been performed in more than one location, making it more accessible to the general South African public, thus ensuring more potential data regarding various socio-cultural paradigms.

Furthermore, the Mobile Application could have provided a short questionnaire or additional tabs which the audience had to engage with and answer prior to the performance. The questionnaire or additional tabs could have addressed basic information such as: frequency of attending theatre, dance or physical theatre performances, age, gender, and cultural background.

6.4 Suggestions for further research

With reference to the shortfalls, as discussed above, socio-cultural backgrounds of audience members need to be taken into consideration when expanding upon this research. The application, for instance, could possibly have a tab where the audience could choose and select their appropriate/relevant ethnicity such as how frequently they attend theatre and/or physical theatre performances, their age, gender, and socio-cultural paradigms. This may suggest culturally congruent characteristics within emotion, leading to a better understanding of how emotion and meaning can be portrayed and perceived in dance-based physical theatre. This may make dance-based theatre more accessible to the public and assist in expanding this form of theatre. According to Wahl (2019:4), movement is multifaceted therefore there "are many possibilities for perceiving it". By considering the cultural backgrounds, these multifaceted possibilities could be explored. Performers in dance-based physical theatre may also benefit from this, as it would enhance their performativity.

Furthermore, Cvejic's (2015) discussion on critical departure from emotionalism in Western theatre dance can enhance the knowledge on perception of emotion in dance, performance and physical theatre.

6.5 Concluding remarks

Based on the quantitative section of this study, it is concluded that few audience members grasp the intended meaning portrayed by the choreographer in a dance-based physical theatre performance. Based on the previous research project leading to this study, embodied emotions in dance-based physical theatre could enhance the quality of movement, which could possibly provide clearer intent and context for the audience members watching the performance.

There are two distinct scholarly discourses that were considered throughout the course of this study: 1. Emotion as humanly congruent; and 2. Emotion as personally unique. It is deduced from the knowledge as discussed in the previous chapters, that both discourses play a vital role in the perception and expression of emotion in dance-based physical theatre performances.

It is therefore concluded that the portrayal of emotions in dance-based physical theatre could possibly enhance the audience's understanding of the choreographer's emotional intent and as such add context to the narrative of the performance[228]. In answering the research question, the audience members generally observed the four expressive domains: facial traits; body attitude and orientation; breathing patterns; and sounds when perceiving emotions in a dance-based physical theatre performance. The performance and the three strategies that were incorporated into the facilitation of the embodiment of the emotions in this study, could therefore be deemed as successful. Owing to the shortfalls within this study, as discussed previously, further research is necessary to expand the knowledge and gain more insight into the perception of intended and perceived emotions in dance-based physical theatre.

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[228] In turn this could possibly enrich the audiences understanding of the performance.

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APPENDIX A: Participant: Letter of Informed Consent

Department of Drama

Distinguishing between intended and perceived emotions in a 'dance-based 'physical theatre performance

Dear Participant

You are herewith invited to participate in my MA (Drama and Film Studies) research. This letter will inform you about the nature of the study, your role as participant in the study and ask for your voluntary participation in the project by means of signing the attached letter of informed consent.

1. Description of the research

Choreographers use dancers to portray specific emotions with the purpose of making an impact or conveying a message to an audience. Performances are thus choreographed with a specific message through manipulating emotions intended to arouse feelings in the audience. This study aims to determine whether an audience can observe and distinguish emotional expressions and shifts in a 'dance-based' physical theatre performance where acting technique's based on Alba Emoting[229], is applied. Alba Emoting enables performers to generate emotional states using only physiological experiences, allowing the performer to physically connect with emotion through the use of breathing patterns accompanied by body attitudes and facial expressions (Bloch 2015:246).

You are invited to be one of the three skilled performers from the physical theatre profession to portray three different emotions namely: anger, fear and disgust within a piece choreographed by me. The piece will be viewed by invited audience members who have a background in dance-based physical theatre. The audience will record[230] the emotions they

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[229] An acting technique developed by a neuroscientist, Susana Bloch. Bloch's work only unpacks six basic emotions and does not include the emotive pattern of disgust, which is one of the emotions that will form part of this study. There are various theorists who discuss emotive patterns and how to embody them, such as: Paul Ekman, Robert Levenson and Wallace Friesen (2006:1208-1210); Neel Burton (2016:[sp]); Robert Plutchik and Henry Kellerman (1980:18); Roxanne Rix (1993:139-145) but to mention a few.

[230] The audience members will record their observations by tapping the correlated tab (fear, anger or disgust) on their cellular device. The emotions of fear, anger and disgust will be present at different moments throughout the performance. This is further discussed on page two.

observe throughout the duration of the performance. The data will be collected anonymously as there is no way to trace back the choices of the audience members.

The data will be analysed after the performance has taken place by myself under the guidance of my supervisor to determine whether the study was successful or not. The work will be performed in the University of Pretoria's Lier theatre in April 2019.

2. Your role in the research process

According to the international ethics standards upheld by the University of Pretoria, it is required that all participants explicitly agree to participate in any form of research. This is not a contract that binds you (the participant) to anything, but rather a consent form to ensure that you understand the purpose of the study, as well as of your involvement. Importantly, the focus of the research is on how the audience perceives and distinguishes the emotions displayed and portrayed in the performance as a whole not on you your individual performance. The research process will entail the following:

- attending all rehearsals starting nearing the end of February and the full month of March 2019;

- dancing in the final performance;

- exploring three emotions during the rehearsals: anger, fear and disgust within the choreography;

- the emotions will be explored though the use of acting technique's such as Alba Emoting[231], amongst other.

- any deviation from the conditions above will only occur with your explicit approval and your consent will be sought in writing;

- the performance will be viewed by an invited audience who will use a webpage on their personal cellular mobile devices to record[232] the different emotions they observe throughout the duration of the performance;

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[231] Refer to footnote 185, on page 129.
[232] Refer to footnote 186, on page 129.

- the performance(s) will be recorded and photographed by the me as researcher for archival and interpretation purposes, and

- the University of Pretoria and myself as researcher will not be held accountable for any injury by signing this letter of consent.

3. Data storage and re-use

Video recordings, the data on the webpage, photographs, consent forms and related research material will be archived at the UP Drama Department's recorded material in room 2-16 for 15 years. Access to the recordings and journals will be limited to Miss Z Papenfus, the research supervisor and head of department. In the case that I might use the data for further research, I would obtain the renewed written permission of every participant. The raw data will not be made available to any parties other than those stipulated in this letter.

4. Confidentiality and anonymity

The rehearsal process is an exploratory space and therefore any personal information that is shared during the rehearsal process, is confidential and will not be shared with any parties outside of the research and participant teams. Please note that your contribution is extremely valuable to the study. Without participants, this study cannot take place. Therefore, your involvement during the research period will be discussed, described and analysed during the formulation of the research document. To protect the anonymity of your responses in the dissertation, no names will be mentioned and you will be given a code name. You are thus assured of full anonymity of your responses in the academic documents forthcoming from this study. As the performance is a professional event and will take place in front of invited audience, anonymity cannot be assured.

5. Voluntary participation

Participation is completely voluntary and no-one will be forced to participate.

6. Withdrawal

Participants can withdraw from the research process at any time prior to or during the rehearsal process without negative consequences, but if you have completed the rehearsal process you will need to complete and take part in the performance.

7. Benefits

There are no financial benefits to your participation.

8. Potential risk

There are no risks associated to your participation.

9. Contact details

<u>Researcher</u>

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PLEASE COMPLETE:

Consent

• I have read, and I understand, this consent letter.

• I voluntarily give my consent to participate in this study.

• I will not hold the University of Pretoria and/or the researcher liable for any injuries.

Participant's full names: _____

Participant's contact details:

_____

_____

_____

_____

_____

Participant's signature: _____   Date: _____

Researcher's signature: _____

APPENDIX B: Audience: Letter of Informed Consent

Department of Drama

Distinguishing between intended and perceived emotions in a 'dance-based 'physical theatre performance

Dear Participant

You are herewith invited to participate in my MA (Drama and Film Studies) research. This letter will inform you about the nature of the study, your role as an audience member in the study and ask for your voluntary participation in the project by means of signing the attached letter of informed consent.

1. Description of the research

Choreographers use dancers to portray specific emotions with the purpose of making an impact or conveying a message to an audience. Performances are thus choreographed with a specific message through manipulating emotions intended to arouse feelings in the audience. This study aims to determine whether an audience can observe and distinguish emotional expressions and shifts in a 'dance-based' physical theatre performance where acting technique's based on Alba Emoting[233], is applied. Alba Emoting enables performers to generate emotional states using only physiological experiences, allowing the performer to physically connect with emotion through the use of breathing patterns accompanied by body attitudes and facial expressions (Bloch 2015:246).

Three skilled performers in the physical theatre profession will portray three different emotions namely: anger, fear and disgust within a piece choreographed by me. The piece will be viewed by an invited audience (which you form part of). As a member of the audience you will be expected to record[234] the emotion you observe throughout the duration of the performance.

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[233] An acting technique developed by a neuroscientist, Susana Bloch. Bloch's work only unpacks six basic emotions and does not include the emotive pattern of disgust, which is one of the emotions that will form part of this study. There are various theorists who discuss emotive patterns and how to embody them, such as: Paul Ekman, Robert Levenson and Wallace Friesen (2006:1208-1210); Neel Burton (2016:[sp]); Robert Plutchik and Henry Kellerman (1980:18); Roxanne Rix (1993:139-145) but to mention a few.

[234] You will record your observations by tapping the correlated tab (fear, anger or disgust) on your personal cellular device. The emotions of fear, anger and disgust will be present at different moments throughout the performance. This is further discussed on page two.

The data will be collected anonymously as there is no way that your indicated choices can be traced back to you. The data will be analysed after the performance has taken place by myself under the guidance of my supervisor to determine whether the study was successful or not. The work will be performed in the University of Pretoria's Lier theatre in April 2019.

2. Your role in the research process

According to the international ethics standards upheld by the University of Pretoria, it is required that all audience members explicitly agree to participate in any form of research. This is not a contract that binds you (the audience member) to anything, but rather a consent form to ensure that you understand the purpose of the study, as well as of your involvement. Importantly, the focus of the research is on how you perceive and distinguish the emotions displayed and portrayed by the dancers in the performance. The research process will entail the following:

- connecting with the University of Pretoria's guest wifi in order to download a webpage;

- downloading the required webpage to your personal cellular phone form the URL given by the choreographer before the performance commences for data recording;

- attending the full duration of the performance and using the webpage on your personal cellular mobile device to record[235] the emotion you perceive at a certain time;

- as an emotion is observed you tap the tab of that specific emotion on the screen;

- viewing the performance attentively and;

- no video recordings or photographs may be taken throughout the duration of the performance.

3. Data storage and re-use

Video recordings, the data on the webpage, photographs, consent forms and related research material will be archived at the UP Drama Department in room 2-16 for 15 years. Access to the recordings and journals will be limited to Miss Z Papenfus, the research supervisor and head

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[235] The data will be recorded as you tap the tab on the screen - there are three different tabs: fear, anger and disgust. As you observe an emotion you tap the tab. The emotions will be portrayed more than once and will be portrayed in different orders as the performance commences.

of department. In the case that I might use the data for further research, I would obtain the renewed written permission of every participant. The raw data will not be made available to any parties other than those stipulated in this letter.

4. Confidentiality and anonymity

Without participants, this study cannot take place. Therefore, your involvement during the research period will be discussed, described and analysed during the formulation of the research document. No names will be mentioned in the research document, but the anonymity of your responses in the academic documents forthcoming from this study cannot be assured.

5. Voluntary participation

Audience participation is completely voluntary and no-one will be forced to participate.

6. Withdrawal

Audience members can withdraw from the research process at any time prior to the performance process without negative consequences.

7. Benefits

There are no financial benefits to your participation.

8. Potential risk

There are no risks associated to your participation.

9. Contact details

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PLEASE COMPLETE:

Consent

• I have read, and I understand, this consent letter.

• I voluntarily give my consent to participate in this study.

Audience's full names: _____

Audience's contact details:

_____

_____

_____

_____

_____

Audience's signature: _____   Date: _____

Researcher's signature: _____