Performativities, Virtualities, Abstractions, and Cunningham's *BIPED*

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Abstract

This thesis explores the complex relations between subjective perception and dance movements, mainly exemplified by drawing on two short extracts from Merce Cunningham's choreography *BIPED* (1999). The central aim of the study is to formulate a performative phenomenological inquiry, which moves beyond an identification of essences, and towards an understanding of the lived experience of a dance performance as being grounded on iterations of the "abstract". The concept of the abstract primarily signifies an alternative mode of understanding Henry Bergson's notion of duration. Considering Gilles Deleuze's reading of Bergson's intuition as a method to divide the experience of a lived present into a temporal difference in kind between the virtual and the actual, this thesis suggests a complementary division of duration into virtual and actual kinds of abstraction.

In addition to Bergson's method of intuition, the discussion is phenomenologically rooted in Maurice Merleau-Ponty's concept of the body image and Gaston Bachelard's idea of non-causal reverberation. As with the case of intuition, those phenomenological concepts are applied unconventionally. Rather than serving as a pre-objective ontological basis for an analytical and scientific understanding of subjective embodiment, the notion of a reverberating body image is here treated as a form of mimesis, performatively constituted through symbolic and representational practices. Hence, in phenomenological terms, the rationale of the thesis is predominantly sustained by the philosophy of Ernst Cassirer, arguing that reality cannot be approached directly, but only through the concept of the symbol.

The viewpoint from where I speak has performative cybernetic characteristics, continuously and dynamically transgressing boundaries and reconstituting itself through iterative and citational practices. Additionally, as I move between the analytical and the intuitive, as well as between the virtual and the actual, the formal structure of the thesis corresponds to a liminal transformation of the speaking subjectivity.

I declare that the research presented in this thesis is my own work

Johan Stjernholm

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Introduction

I. Subject of inquiry

This thesis examines relationships between subjective perception and dance movements. Those primary relationships, in turn, imply a wide range of interdisciplinary secondary relationships, relating to embodiment, memory, performance, subjectivity, various modes of representation, mediation, observation, theory and choreographic practices. The perception in question refers to a phenomenologically induced approach, mainly stemming from Ernst Cassirer (1953), Maurice Merleau-Ponty (1962), and Gaston Bachelard (1994; 2000). My application of phenomenological theory is further characterised by a particular reading of the three concepts performativity, virtuality, and abstraction. The dance movements in my study are mainly exemplified by drawing on two short extracts from Merce Cunningham's work BIPED (1999), represented as subjective experiences of live performances, video recordings, textual representations, and memories. Additionally, I consider a textual study on choreographic practices by Susan Foster (1998), and elements from William Forsythe's (2009) collection of choreographic tools for movement generation.

(a) Terminology

My definition of performativity is based on the tradition of ordinary language philosophy by John L. Austin (1975), who first introduced the idea of the performative in 1955, and the subsequent critique of his concept of performativity by Jacques Derrida (1982). However, the more specific performative characteristics of my discussion are more closely affiliated to the field of gender studies, particularly Judith Butler's (1990) reading of Derrida's performativity, and Susan Foster's (1998) critique of Butler as being too much concerned with verbal practices, as opposed to embodied, non-verbal practices.

The virtual is a concept which has a great variety of meanings and applications. The principal, but not exclusive, way in which I will refer to the virtual is strongly linked to the philosophical tradition of Gilles Deleuze (1994), who in turn derived his ideas on the virtual from a reading of Henry Bergson (1908). The scholar Paul Harris (2005) highlights how Deleuze's notion of virtuality is distinct from the more colloquial understanding of the virtual as computer generated simulations, and applies Deleuze's concept of virtuality to architectural spaces as a folding, or turning inside out, of the actual realm. While I will refer to computer related "virtual" practices, most notably in

the form of the motion capture technology used by Cunningham in his work *BIPED*, it is important to notice that this more mundane denotation of the terms "virtual" and "virtuality" is not the main consideration of my discussion. As regards *BIPED*, the "virtual" characteristics of the motion capture derived computer simulation - in the form of graphic representations of figures moving in a three dimensional mathematical model of space - are here seen as a perceptual abstraction rather than as an instance of the virtual.

Two alternative applications of the virtual that I will discuss at some length are the virtualities of Susanne Langer (1953) and Dee Reynolds (2007). Both Langer and Reynolds address the concept of the virtual directly in relation to dance practices, and both are rooted in the phenomenological tradition: in the case of Langer, Ernst Cassirer (1953), and in the case of Reynolds, Maurice Merleau-Ponty (1962; 1968). Langer's and Reynolds's development of the virtual are also strongly related to the vitalist tradition, which argues that the origin of dance is to be found in a primeval urge to move, as a basic impulse towards an externalisation of an inner emotional state (Martin, 1946; Sachs, 1937).

However, in the general sense of the word, neither Langer, nor Reynolds can be strictly classified as vitalists. To the contrary, Langer criticises the idea that the essence of dance should be found in "the naturalistic doctrine that dance is a free discharge either of surplus energy or of emotional excitement" (1953, p. 177). Instead, Langer aligns herself with Cassirer's argument that art has to be understood as symbolic form, and her definition of the virtual corresponds to the very essence of each particular art form as a unique primary illusion in the mind of the perceiver. Reynolds (2007), on the other hand, does not aim to define any essence or origin of dance. While she does refer to the vitalist dance critic John Martin's (1933b) influential theory on kinaesthesia and metakinesis, her focus is rather on how kinaesthetic imagination provided a creative force in the development of modern dance, particularly as it was practised by Mary Wigman, Martha Graham, and Merce Cunningham. The virtual, in Reynolds's account, corresponds to a phenomenologically understood intentionality, which is largely derived from her reading of Merleau-Ponty (1962).

The notion of the abstract plays a most crucial part in my discussion. Not only, as already implied, does it signify the common understanding of "virtuality" as a

computer simulation, but it has a much wider and more fundamental role in the development of the thesis. Superficially, the concept of the abstract could be understood as analogous to the idea of a representation, in the sense of being an abstract signifier of something. A more comprehensive understanding of my use of the term will appear from Chapter Three, where I develop and combine the phenomenological and performative ideas into a synthetic and enlarged mode of subjectivity, which in Chapter Four is introduced as the "meta-subject". Through the subjective experiences of the meta-subject, in relation to Cunningham's *BIPED*, the last three chapters demonstrate how the concept of the abstract may attain additional performative and phenomenological meaning as an alternative to Bergson's (1908) durational experience of time.

(b) Looking at BIPED

The use of BIPED as a case study is not critical to the development of my thesis. All the key concepts, such as "phenomenal performativity" in Chapter Three, the "metasubject" in Chapter Four, the various synthetic contemplations in Chapter Five, as well as my proposal for a third complementary rule of Bergsonian intuition and the "virtual performative" in Chapter Six, could be derived from any dance performance, as long as it contains representations which allow for denotations related to subjective embodied being. In fact, the entire content of the thesis could be exemplified without referencing any dance performance at all, since the same concepts are indeed identifiable even in a basic textual signifier with denotative embodied value, such as the word "arm" or "leg". However, such a reading would only be valid on the condition that my use of the term virtual is comprehensively understood, and since I do not arrive at an in-depth definition of the virtual until the sixth chapter, I have included *BIPED* in my thesis for the sake of clarity. BIPED serves as a focal point that orientates the discussion specifically towards the perception of embodied dance practice, as opposed to, for instance, a linguistic study or a discussion on embodied practices in general, hence its usefulness to the thesis.

This is not to say that my choice of two extracts from *BIPED* as case studies is arbitrary. On the contrary, they are carefully chosen for three main reasons: the first has to do with the ways in which the two extracts illustrate and emphasise particular aspects of perception; the second reason concerns the contextualisation of the thesis; and the third is related to Cunningham's position and choreographic agenda in relation to the development of modern dance during the twentieth century, especially in relation to the tradition of vitalism.

The first extract, which is represented on the attached DVD as *Clip 1*, emphasises the durational and synthetic aspects of perception, which I mainly discuss in Chapter Five. The extract is unique in the sense that it contains a movement sequence which could be seen as one sustained movement, lasting for approximately fourteen seconds, yet the same movement could be analysed as consisting of movement sequences of a much shorter duration. While any movement could be analytically divided into smaller parts, or sequences, anatomically and/or temporally, and hence, any movement could illustrate the same ideas as I derive from my observation of *Clip 1*, this particular sequence provides me with an unusually dynamic example of how this could be done, due to the dramatic durational difference between the movement sequence as a whole and its apparent parts.

The second extract, represented as *Clip 2* on the attached DVD, illustrates another aspect of durational representations. In this case, I particularly pay attention to the relative differences and similarities between the computer animated and motion captured humanoids in relation to a human embodied dancer, as well as the temporal and spatial distribution of my perception. Moreover, the mixture of representations in my perception, projections of decoded strings of data and a material body in motion, gives a clear example of how one perception is a synthetic multiplicity with a multitude of fragmented origins, distributed not only in space and time, but also in abstract processes of encoding and decoding. However, as I will demonstrate in the final two chapters, both extracts from BIPED, as well as any representation of embodiment, whether this is in the form of a dance movement or a textual signifier, operate according to the same principle of fundamental difference: the actual perception of representations that appears to be different or similar is founded in a totalising virtuality, structured by degrees of difference. The choice of case studies affects the particular way in which my thesis actualises on the level of representation, but it does not change the fundamental phenomenological and virtual structures which support and lend meaning to that representation.

II. Contextualising the thesis

The context of the thesis is the second reason why I chose Cunningham's *BIPED* as the main source for my case studies. Apart from being situated in, or rather, in between, the

core fields of my discussion - which, as I have defined above, includes phenomenology, gender studies, the traditions of linguistics and ordinary language philosophy related to performativity, as well as the vitalist tradition of dance practices and dance writing - the original formulation of my research project was strongly influenced by choreographic explorations of body/technology interaction. Examples from this field include the work by the performance artist Stelarc (2008), the dance/installation artist and scholar Sarah Rubidge (2000; 2002; 2003), the dancer and choreographer Robert Wechsler (1997a; 1997b; 1998; 2009), and the choreographer and scholar Johannes Birringer (2009), who in a recently published work discusses numerous examples of performances that engage at different levels with technology and science (2008).

Given my own background as choreographer and dancer, the thesis started out as a choreographic inquiry related to my research question, aiming to address the key concepts of the thesis - which are the virtual, the abstract, and the performative - in choreographic practice. I initially projected the research project as a collaboration, combining the resources offered by the University of the Arts London, in the form of the Research Centre for Fashion the Body and Material Cultures, the Postgraduate Diploma Character Animation Course at Central Saint Martins, the MA Costume Design for Performance at London College of Fashion, together with my own practice as a choreographer, primarily rooted in the tradition of European dance theatre. The main objective of that collaboration was to develop a work which practically would explore body/technology relationships through costume design, computer animation, and aesthetic embodiment.

However, as I was researching the field of interactive practices, I discovered that there was already in place a body of work and choreographic practices with a sophisticated level of complexity in terms of body/technology interaction, as I will exemplified below through the work of Stelarc (2008), Rubidge (2003), Wechsler (2009), and Birringer (2009). During my initial research I also became increasingly aware of the crucial importance of perception in relation to practices aiming to generate a body/ technology interaction. Visiting interactive interactive workshops, for instance conducted at the Brunel University in London, and at the Ishiguro laboratory in Osaka, Japan, I found that just because I was inserted in an environment where sensors were reading and giving me feedback to my movements, and machines responded to my actions, I did not necessarily perceive, or experience myself as being interactively

engaged in the process. On the other hand, while "passively" watching a theatrical dance performance, sitting in an auditorium, I could get the subjective experience of actively becoming part of the work. Based on those first-hand experiences, I concluded that the theory accompanying contemporary dance performances, especially the kind of practice that claims to generate audience interaction, had to be developed in order to accommodate for the agental role of the perceiving subject. Hence, while my research question remained unchanged, my method shifted from choreographic practice to a phenomenologically related inquiry of how a subject performatively constitutes its subjectivity in relation to artistic representations of the virtual and the abstract.

(a) Practices of body/technology interaction

Generally speaking, the discursive aim of performance related interactive body/ technology practices could often be described as a questioning, development, and/or redefinition of traditional or conventional boundaries. The particular boundary in question varies from case to case. Stelarc (2008), for instance, focuses on the concept of the cyborg, which emphasises human/machine relationships. The work *Ping Body* (1996) consists of Stelarc connecting his body to the Internet via a muscle stimulation interface. Audience members can view and actuate involuntary movements in the interfaced body, but only indirectly. The signals that activate Stelarc's movements are generated by means of "random pinging (or measuring the echo times) to Internet domains" (ibid.). Hence, *Ping Body* exemplifies a questioning of control between the human and the machine, where the collective activity of the Internet determines the movements of a body, as opposed to the normal situation where collective bodies determine the operations of the Internet.

In contrast to Stelarc, Rubidge's (2002) theoretical discourse emphasises the notion of performativity, referring to issues related to author/viewer/performer distinctions. The installation *Sensuous Geographies* (2003) - a collaboration between Rubidge, the composer Alistair MacDonald, the costume designer Maggie Moffatt, and the installation artists Maria Verdicchio and Sebastien Besse - is defined as as having performative characteristics in the sense that the audience is invited both to generate and become an integral part of the installation environment as they engage with it (Rubidge, 2003). Wechsler (1997a) shares Rubidge's interest in setting up environments that stimulate audience/performer interaction. His software "Touchlines" (ibid., p. 31), for instance, enables both audience and performance space. Since the touches

trigger "changes in sound, music, lighting, or projections" (ibid.), the audience members effectively also become performers and co-creators. Yet another boundary that Wechsler addresses is that of the virtual/actual. Some day in the future, he suggests, dancers may "rehearse together in 'virtual studios'" (ibid., p. 30), referring to computer simulated graphical representations of rehearsal spaces. The future that Wechsler imagined might in fact already have arrived, since Birringer already in 1999 set up the digital dance and technology laboratory *Migbot*, which, amongst other things, offered participants/audiences the option to "dance in virtual space" (2009).

(b) Theoretical implications

While far from exhausting the theoretical discourse accompanying the field of performance based body/technology interaction, it is possible to understand a large part of that theory in terms of issues relating to the concepts of the cyborg, the performative, and the virtual. Typically, the notion of the cyborg addresses boundaries concerning organism/machine, the performative addresses author/performer/audience distinctions, and the virtual offers the concept of computer simulation as an alternative and/or complement to physical bodies and spaces. However, looking outside the theory commonly linked to the above performance-related practices, there are additional levels of intricacy and diversity connected to the concepts of the cyborg, the virtual, and the performative. I have already given some examples of how both the performative and the virtual have been developed in diverse directions, and I will develop those notions further in Chapter One. The idea of the cyborg has also been given a wide range of applications and meanings. The origin of the cyborg, for instance, dates back to the September issue 1960 of the Journal Astronautics, in which Manfred Clynes and Nathan Kline's article "Cyborgs and Space" introduced the term cyborg as signifying a technologically modified human body, capable of sustaining life in outer space. Since then, the cyborg has evolved in multiple directions (Shepherd, 2004), partly through the writings of the American scholar Donna Haraway (1991), who has situated the cyborg as an alternative feminist site of political and social power, challenging and undermining established patriarchal structures and capitalism.

As the practical performance-based exploration of body/technology interaction has advanced, new questions have emerged relating to consciousness and embodiment. Birringer (2008, pp. 261-262), for instance, refers to the keynote speech given by the scholar Roy Ascott at the international CROSS FAIR 2000 exhibition-conference named "The Intelligent Stage". The two main features of the intelligent stage were

defined as, "first, its location and effect in cyberspace and in distribution across the Net. Second, its role as a space for modeling new structures and behaviours, both human and artificial, that follow the impact of new technologies and the globalization of culture" (ibid., p. 262). As a result of the, as it were, cyberspatial distributions and new behavioural structures instigated by the intelligent stage, a series of questions were raised by Ascott:

"1. what is it to be human in the post-biological culture, and what is it to have mind and body distributed in cyberspace?

2. how might artists deal with the responsibility of redefining nature and life itself?

3. what might be the consequences for the arts of the convergence of computers, biology and nanotechnology?" (Ascott, in ibid., pp. 261-262).

BIPED, with its use of motion capture technology, exemplifies some aspects of the intelligent stage that were discussed during the CROSS FAIR 2000 conference, in the sense that it involves "artificial perception systems" (ibid., p. 261). However, in other respects, *BIPED* could be classified as a rather conventional theatrical dance performance. The audience, for instance, is never invited to partake or interact with the projected images, but they are traditionally positioned in the auditorium in the role of perceivers. Since the motion captured and animated sequences that are part of *BIPED* are not generated during the performance, rather they are pre-encoded, and not even the dancers are actively manipulating the images. Instead, the body/technology interactivity, in the form of an intelligent stage, was only part of the creative process of making *BIPED*, and does not appear as an active ingredient during the performances of the work.

It is in the particular mixture of conventional performance and intelligent stage characteristics that I trace the second reason for my choice of Cunningham's work *BIPED* as the source of my case studies. The origin of the thesis sprung from an interest in the kind of practices that are performed in relation to the intelligent stage, and the accompanying questions regarding performative and virtual embodiment, consciousness and human existence. However, addressing those practices and questions, I was aiming to push the notions of the the virtual and the performative further than existing discourse. In *BIPED*, I had identified a work that shared some of

the features of the intelligent stage, yet it did not actively create a live interactive environment. Hence, there was a particularly weak presence of the typical application of the terms performativity and virtuality, as a questioning of the boundaries between audience/performer/creator and the real versus the simulated. This absence of any immediate performative and virtual characteristics, in the form of audience body/ technology immersion, made it possible for me, in the early stages of my research, to partially liberate my conceptual framework from, yet connect to, existing theory on the performative and the virtual.

(c) Cunningham and expressive movement

The third reason why I chose *BIPED* as my case study has to do with how Cunningham historically has been positioned in relation to the vitalist tradition. The dance scholar Susan Foster (1988), for instance, situates Cunningham's practices in radical contrast to the vitalist definition of dance. Instead of the vitalist proposal of movement as inherently expressive of inner human emotions (Martin, 1933b), and a path towards a primeval and lost sense of wholeness and vital force, she suggests that human feeling and movement, in Cunningham's work, "could and should be seen as separate realms of events, whose correspondences were haphazard at best" (1988, p. xiv). The Italian arts critic Germano Celant (2000, p. 24) takes this view even further, arguing that Cunningham objectified movement and choreographic elements to the degree that "it is possible to use any movement whatsoever, any sound, any image, any style".

Cunningham has always demonstrated an openness towards a wide variety of interpretations of his work, for instance in his statement that "Any idea as to mood, story, or expression entertained by the spectator is a product of his mind, of his feelings; and he is free to act with it" (1970, p. 42). Yet, he also acknowledged the fact that any movement potentially is expressive: "Gesture *is* evocative: those moments which are not intended to express something, but are nevertheless expressive" (Lesschaeve, 1999, p. 107). The question as to *what* his movements would express he left unanswered.

The ambiguity in Cunningham's work regarding movement, expression, and perception, which I will explore in further detail in Chapter Two, is closely affiliated to one of the phenomenologically oriented objectives of my study, which is to provide an account of how movement may be perceived as being expressive, without prescribing what is being expressed. Hence, the third reason for my choice of *BIPED* is the affinity

between the open attitude Cunningham consistently demonstrated towards the expressiveness of movement and my objective to remain non-prescriptive regarding expression in my phenomenologically derived method of inquiring into my research subject.

III. Research aim and objectives

I have already touched upon how one of my central research objectives is intimately connected to the contextualisation of my study in regard to the inherent expressiveness of movement. This objective is to address how and why embodied movement could be said to be expressive, in the sense that it operates as a representation of something, without being prescriptive as to what the movement specifically would represent or express. I intend to investigate this matter by means of a second objective, which is to develop the notions of the performative, the virtual, and the abstract, not only as a reinterpretation of the conventional understanding of each concept, but as concepts that are, in the context of perception, intimately and structurally related to each other.

A third research objective is to relate the above embodied movement representations to a distributed cybernetic performative state of being, which I refer to as the metasubject, in which the body transgresses its conventional organic boundaries and extends fragmentarily, not only in space and time, but also in levels of abstraction, such as sense-perception, memory, text, images, and algorithmic processes of encoding and decoding. Part of this objective is to address the state of consciousness, and the unconscious, of this meta-subject.

The aim of the thesis is to advance the phenomenological concept of perception beyond its current range of application, as a study of essences, to become a study of abstraction, as a mode of subjective performative constitution related to the realm of the virtual. This aim, like the above set of objectives, has to be understood in relation to the overall content and context of the thesis, which are concerned with the perception of dance movements, and the way in which embodied subjectivity performatively engages in that which is perceived as embodied movements. Hence, I am not aiming for a full revision of the phenomenological tradition, rather I am aiming at developing a particular mode of cybernetic performative perception which includes a partial rereading of my phenomenological sources. The above defined research aim is intimately linked to a guiding question, asking whether the virtual performativity of the abstract, in addition to its role in relation to audience perception, could provide a framework for the purpose of examining contemporary choreographic practice. While strongly related to the research aim, the question does call for a radical departure of my primary methodological approach, in the sense that my intuitive phenomenological stance as a perceiver has to be replaced by a more objectified and analytical viewpoint. In order to clarify the relationship between my viewpoint, objectives, aim, and research question, I will below outline how the thesis will proceed, and how the methodology is dependent on, and indeed modified by, the theoretical development that takes place throughout my discussion.

IV. Methodology and structure of the thesis

The thesis proceeds incrementally, and the content of each chapter does not reveal its full relevance until Chapter Six, when all the pieces of the model of perception that I will discuss are put into place. The reason for this approach is that the main method of the thesis is to allow the practice of perception to reverberate and interact with the theory, and vice versa. Hence, the content of the thesis coincides with its methodological development, and theory and method are intimately intertwined, or coupled, with feedback loops to each other, so that they cannot be separated without losing their synthetically combined production of meaning.

One effect of the close coupling between theory and method is that each chapter makes little sense on its own. In order to assist the reader, I have included a short introduction and conclusion in the first five of the six chapters, where I outline how the content relates to the preceding and the following chapters. The first chapter, however, providing the point of departure for the thesis, is of crucial importance, since its aim is to provide the setting within which the thesis may continue as a system with internal feedback, or resonance, between the theory and practice. This is achieved by the establishment of a particular viewpoint which corresponds to the subject of my research, to the effect that the thesis becomes an entirely self-reflexive study: The subjective viewpoint of the observation is also the studied object.

The viewpoint is initially constructed as a symbiosis between the concepts of the performative, the liminal, and the cyborg, but the meaning each of those concepts is multi-faceted and changes during the course of my discussion. The liminal, for instance, as it was introduced by the anthropologist Victor Turner (1969), consists of

three stages: a separation from the mundane, a transformative state of liminality, and a reaggregation back to the ordinary. Those three stages may also serve to outline the entire structure of the thesis.

The state of separation is initiated by the establishment of a viewpoint. The state of liminality corresponds to the transformation and synthesis of discursive formations. which from a conventional perspective would not operate in conjunction with each other, such as Cunningham's choreographic practice, Austin's (1975) linguistics, Butler's (1993) theory on gender, Merleau-Ponty's (1962) phenomenology of perception, Bergson's (1908) philosophy on the virtual, cybernetic theory (Shepherd, 2004; Haraway, 1991), and not to forget, Turner's (1969) liminality. The reason why those different conceptual frameworks do not usually operate together is not only due to the fact that they belong to different academic and scholarly fields, but also because many of them appear problematic in combination. For instance, one contradiction could be traced in Butler's (1993) notion of the performative embodied subject, which is intimately dependent on the social matrix of conventions, versus Turner's (1969) state of liminality, which moves in between and avoids established social conventions. It appears that a performative liminal subject is something of an oxymoron. However, during the final state of the liminal, the reaggregation, which corresponds to the final chapter and the conclusion of the thesis, the various concepts are joined together in the form of a model of perception with a radically different structure to the mode of perception described at the outset. In the reaggregated state, the initial paradoxes have been replaced with alternative perceptual relationships, which not only affects my mode of perception as a subjective observer, but also grants me access to analytical tools that goes beyond observation and towards choreographic practice.

(a) The structure of the method

Since theory and method are coupled together in the text, the method of the thesis could usefully be described in the form of an overview of how the thesis will progress. I have already touched on how the first chapter sets up a liminal perspective, or viewpoint, from where I perform my observations. However, the liminality of this perspective is not pure, but is characterised by cybernetic and performative features. Hence, the liminality of the viewpoint moves between the various states of the liminal process itself, and could be described as the establishment of a hybrid identity that practices the condition of performative cybernetic liminality. Chapter Two corresponds to a second preparatory step towards the state of transformative liminality. There, I discuss different views of Cunningham's choreographic practices, and relate them to ideas about the virtual. The purpose of this is to demonstrate the limits of existing concepts of the virtual in relation to my inquiry and point towards a potential for development. Chapter Three in some respects works in parallel to Chapter Two, as I look at existing ideas on the performative. However, I also link the notion of the performative to phenomenological concepts, thereby initiating a process of synthesis which transforms the performative in relation to phenomenology. The result is a basic identification of a performative/ phenomenological structure of subjective perception in the form of the "abstract performative".

The fourth chapter continues the transformation by bringing the notion of the cyborg into the performative/phenomenological synthesis from Chapter Three. The effect is an extension of the perceiving subject in terms of spatiality, temporality, and in modes of abstract representation. At this point, there is still an absence of any kind of Deleuzian virtuality in my analysis of the performative/phenomenological/cybernetic subject. Hence, I introduce Bergson's (1908) intuition, as a method of dividing differences in kind between the virtual and the actual (Deleuze, 2002), and the thesis decisively moves away from the analytical subject/object division of perception, towards the idea of perception as a duration which primarily is to be understood through intuition. Moreover, the perception is not directed towards an object which exists externally to the subject, but becomes in itself a representation of a duration, or a lived experience within the cybernetic subject. The problem with this transformation is that from the intuitive viewpoint, the cybernetic extension of the perceiving subject causes certain anomalies in the intuitive method of division: the lived experience still does not fully reveal its virtual characteristics. As a response to this problem, I suggest a re-reading of Bergson's representation of duration, where the temporal is complemented with the notion of the abstract.

Deleuze's (1994) reading of Bergson's concept of duration and the virtual is closely connected to ideas of difference and repetition. Thus, as I complement, or modify, the Bergsonian notion of duration for the purpose of applying the concept of virtuality to my definition of an extended subjective mode of perception, there is a need to address how the concepts of difference and repetition are affected through this modification. Chapter Five investigates how difference and repetition operates in the perception of the enlarged phenomenological cybernetic performative subject. I particularly pay attention to how the constitution of time in a conventionally embodied subject, or an individual, relates to the notion of abstraction in the transformed meta-subject, preparing the ground for the more detailed discussion on the virtual in relation to the abstract in the following chapter.

Building on the discursive advances in Chapter Five, the sixth chapter revisits the problem posed in Chapter Four by providing a more detailed structure of how the durational virtuality of the abstract relates to the virtuality of the temporal. In this process, a new mode of performativity is discovered, the "virtual performative", which calls for a liminal reaggregation of the meta-subject into an ordinary, albeit transformed, subject. The transformation is completed in Chapter Seven, and as I exit the liminal state of the meta-subject, I find myself in the position of being able to address my research question relating the virtual performative to choreographic practice. Hence, the last chapter marks a radical departure from the earlier chapters in that the method changes from an introspective and intuitive perspective of the abstract to an analytical and objectified mode of temporal subjectivity which approaches the abstract as a citation rather than a lived perception.

Chapter 1: A perspective from the thresholds

I. Introduction

This first chapter addresses the crucial role of establishing a viewpoint for my study. The viewpoint that I will develop is characterised by certain ideas from three main fields, from which I derive three central concepts. The fields are anthropology, gender studies, and linguistics; and the concepts, which are the performative, the cyborg, and the liminal, to some extent overlap the boundaries of the fields of inquiry. The performative, for instance, which is rooted in linguistic theory (Austin, 1975; Derrida, 1982), has been transformed through a critique on gender (Butler, 1993), and subsequently applied anthropology (Hastrup, 1995), as well as performance studies.

In my application of the concepts of performativity, cybernetics, and liminality, my aim is to synthesise them into one multi-faceted perspective, capable of transgressing the conventional boundaries which define and demarcate, most importantly, the notion of the subject as a singular body/mind which directs its senses towards the world as something that is objectified and external to the subject. Other boundaries that I will question are the distinctions between audience and performer, theory and practice, and also that of immediate perception and analytical reflection. The notion of viewpoint plays a most vital role in my thesis, since, while it is expressed through theory, it also constitutes the practical method by which I intend to achieve my aim. Hence, theory and method are intimately intertwined at the locus point which corresponds to the viewpoint outlined in this chapter.

I will start with a discussion concerning the general importance of establishing a viewpoint in the context of anthropology and ethnography, highlighting how those fields have been connected both to the phenomenological tradition as well as to performance studies and the notion of performativity. The next step is to take a closer look at how performativity has evolved from its linguistic origin into a tool for discursive inscriptions of embodied gender and identity. Subsequently, the concepts of the liminal and the cyborg are introduced, followed by a discussion on how those three ideas may be combined into one heterogeneous perspective: the point from where I will perform the practice of perception.

II. Attention to the body

One significant feature of critical observational practice is, as the Danish Anthropologist Kirsten Hastrup (ibid., p. 4) emphasises, that "Observation is never neutral" (ibid.). Observation is always situated from somewhere, and even if the place of the viewpoint appears opaque to the observer, the analytical practice that accompanies a scholarly observation will contain traces, or residues, revealing information about the origin of the gaze. For instance, Hastrup points out how "traditional (read 'exotic') anthropology" (ibid., p. 7) has romanticised the Oriental, the African, and the Gypsy. However, in their emphasis on cultural difference on behalf of the exotic "other", the traditional anthropologists spoke just as much about their own domestic culture. As Hastrup suggests, "any description of a particular culture is implicitly comparative, and simultaneously a statement of what it is not" (ibid.) [italics in original]. Moreover, Hastrup identifies in traditional anthropological discourse a certain lack of awareness of the body, and in spite of the fact that all the people that historically have been subjected to anthropological research all have had bodies, as well as the anthropologists that have conducted the research, "the body has been curiously absent in anthropology" (ibid., p. 80).

It is possible to trace levels of discursive absence of the body within scholarly fields other than anthropology. In an overview of the role that the body has played within sociology and dance studies, the sociologist Helen Thomas (2003) argues that up until the 1980s, the body had only been "lurking underneath the surface of the discourses" (ibid., p. 13). Accordingly, the sociologist Joanne Entwistle (2000) points out how the field of sociology of fashion has tended to neglect the body, the things that bodies do, and the meaning the body brings to dress. Starting from the 1970s and up until the end of the twentieth century, however, issues related to the body and embodiment increasingly came to attract academic attention, even to the point that the sociologist Chris Shilling classified the broad rise in academic interest in embodiment as the "body project" (Shilling, in Thomas, 2003, p. 11).

Hastrup suggests a reason for the absence of the body within anthropological theory. Citing Merleau-Ponty's (1962, p. 101) idea that the body is always present as a given and irreducible factor of perception, "always tacitly understood, in the figure-background structure" (ibid.), Hastrup (1995, p. 95) continues:

"The body is the zero-point of perception, the centre from which the senses project themselves out into the world, and defines the horizon of the self. As zero-point it has remained absent from view" (ibid.)

In Hastrup's analysis, the increased focus on the body has moved in two complementary directions. In part, attention has been directed towards the external relationship between subject and object, observer and observed; but there has also been an internalisation of the observing gaze of the subject. It is precisely that internalisation of the embodied gaze towards its own zero-point that Hastrup highlights in the above quote, and once the zero-point of observation was put under the academic spotlight, some inherent advantages in such a self-reflexive approach appeared. For instance, Hastrup argues that as a result of an internalisation of the observing gaze, anthropologists during the twentieth century became increasingly aware of the practical and theoretical implications of their own role as observers, and this awareness altered the power relationship between the observer and the observed, making "friendship between us and them theoretically possible" (ibid., p. 2). Additionally, the revised subject/object relationship within anthropology changed the traditional mode of analysis. Instead of producing knowledge that, according to the American philosopher Richard Rorty, was framed and bounded by the "demands of the object" (Rorty, in ibid., p. 6), the internally gazing anthropologist became a radical interpreter, providing "an understanding that is not already given by the object, but which emerges in the process of theorizing" (ibid., p. 7).

Whereas Hastrup mainly addresses anthropological discourse, she also makes several comparisons between anthropology and theatrical performances (ibid., p. 78). Indeed, a number of scholars and practitioners have established close connections between performance studies, theatrical practices, dramaturgy, and anthropology, examples of which include Eugenio Barba (Barba and Savarese, 2005), Erving Goffman (1959), Victor Turner (1982), Simon Shepherd (2004), and Richard Schechner (Schechner and Schuman, 1976).

Since 1980, Barba (2009), founder of ISTA (International School of Theatre Anthropology) and a collaborator with Hastrup, has arranged a series of interdisciplinary sessions on Theatre Anthropology, a subject defined as "the study of the pre-expressive scenic behaviour which lies at the base of different genres, roles and personal or collective traditions" (ibid.). The participants in each ISTA session has included actors, dancers, directors, choreographers, scholars and critics, who investigated a particular theme or subject through practical classes, work demonstrations and comparative analysis.

Schechner (1988a), who worked with Turner (1982), is a key proponent of performance-related inter-disciplinary connections, advocating a "broad spectrum approach" (1988a, p. 8). Schechner argues that the "complex and various relationships among the players in the performance quadrilog - authors, performers, directors, and spectators - ought to be investigated using the methodological tools increasingly available from performance theorists, social scientists, and semioticians" (ibid.). As part of the broad spectrum approach, Schechner also recommends that performance studies should be more widely taught, outside performing arts departments and as part of core curricula.

One of the first anthropologists to link dramaturgical method to ethnographic research was Goffman (1959), who applied a dramaturgical perspective to a Shetland Islands crofting community and looked at the practices of the daily life of the farmers as if they were actors in a theatrical setting. Goffman identified two kinds of expression in each individual performance of a farmer: "the expression that he *gives*, and the expression that he *gives* off" (ibid., p. 2) [italics in original]. The expression that is *given* consists of communication in a traditional sense, for instance the use of verbal or non-verbal symbols with the purpose of conveying information that is *given off* "involves a wide range of action that others can treat as symptomatic of the actor" (ibid.). Furthermore, the expressions that are *given off* are described as not being fully transparent to the actor.

One implication of Goffman's identification of an expression that is given off is that the perceiver of the performance becomes highly involved in the act as an interpreter, reading layers of expression, given and given off, that would not always appear coherent with one another. Indeed, as Goffman points out, given expressions could sometimes be disguised as if they were given off, as a person may "act in a thoroughly calculating manner, expressing himself in a given way solely in order to give the kind of impression to others that is likely to evoke from them a specific response he is

concerned to obtain" (ibid., p. 5). As a result, the expression that appears to be *given off* could in fact be a carefully acted performance of a *given* expression.

Another implication of Goffman's approach to expression is that, from the perspective of the observing ethnographer, an individual performance involves at least three different viewpoints that have to be accounted for: first, the viewpoint of the actor, who more or less intentionally creates a conflict or tension between the expression that he/ she *gives* and the expression that is *given off*; secondly, the viewpoint of the primary audience of the expressive act, who reads and interprets the actor's multi-layered expressive act; and finally, there is the viewpoint of the external/internal double-gazing scholarly observer. During ethnographic fieldwork, however, the different viewpoints are not always clearly and distinctively stratified.

Hastrup (1995) describes how an ethnographer during fieldwork has a double role, where he/she simultaneously is an external observer, yet intrinsically linked to the actuality of the observed situation. At times, this linkage may even take the form of a sense of merging between the ethnographer and the object of study:

"fieldwork eliminates both subjectivism and objectivism and posits truth as an intersubjective creation. In this sense, fieldwork is almost like a possession, which by itself is nothing but the collapse of the subject-object relation" (ibid., p. 16).

In the collapse of the subject-object relation, there is not only a conflation between the viewpoint of the audience of a performance and the ethnographic observer, but in the sense that the ethnographer has to acculturate his/her body to new patterns of action, the ethnographer becomes an actor him/herself. The awareness of the analogies between anthropological practice and performance practice has, according to Hastrup, led to an epistemological change within anthropology, to the effect that a "shift from informative to performative ethnography is taking place" (ibid., p. 82). The link that Hastrup sees between the establishment of an embodied viewpoint, theatrical acting, and the notion of the performative may be more clearly understood in the context of how the concept of performativity has developed and diversified since its introduction in the 1950s by the philosopher John Langshaw Austin (1975).

(a) Transforming the performative

The idea of performativity was first presented during a series of lectures in linguistics, delivered by Austin (ibid.) at Harvard University in 1955. The term "performative" was suggested by Austin as an abbreviation for "a *performative sentence* or a performative utterance" (ibid., p. 6) [italics in original], which carried the meaning that under certain conditions, to say something is to do something. For instance, during the wedding ceremony, "When I say, before the registrar or altar, &c., 'I do', I am not reporting on a marriage: I am indulging in it" (ibid.). In a similar manner, the act of naming a ship, "*is* to say (in the appropriate circumstances) the words 'I name, &c.'" (ibid.) [italics in original].

However, when Austin developed the notion of the performative, he also specifically excluded from consideration any performative utterance that is made in a theatrical context. The reason for this exclusion was that in Austin's view, performative utterances by a performer on a stage constituted special cases of performativity that were "hollow or void", "parasitic", and "*etiolations* of language" (ibid., p. 22) [italics in original]. However, since its introduction, the notion of the performative has been criticised and developed far beyond Austin's linguistic framework. The philosopher Jacques Derrida (1982) suggests that an actor's citation of a script in a play, which according to Austin is a parasitic anomaly of the performative, partly exemplifies the unavoidable risk of failure that language always is subjected to. Additionally, the actor's performance highlights the very source of Austin's performative. The actor, according to Derrida, explores the conditions without which there would not exist any successful performative sentences.

Derrida's emphasis on the citational character of the performative has been further explored by the American philosopher Judith Butler (1990; 1993), who derives her notion of the performative from Derrida's critique rather than directly from Austin. In her work *Gender Trouble* (1990), Butler looks at how gender conventions are constructed, as well as questioned, in queer and drag performances, and suggests that gender is performative, in the sense that gender is "tenuously constituted in time, instituted in an exterior space through a stylized repetition of acts" (ibid., p. 191). The physical site on which gender is performatively constituted, or enacted, is the body, as "gender is a fantasy instituted and inscribed on the surface of bodies" (ibid., p. 186).

However, the notion of a gender that is inscribed on the surface of a body, through a stylised repetition of acts, raises two problematic questions in regard to agency: First, who is the agent that performs the inscription of gender on the body; and secondly, what is this thing called the body that appears to have an existence prior to being inscribed as a gendered identity?

Butler followed up her work *Gender Trouble* (ibid.) with *Bodies that Matter* (1993), in which she addresses the above questions regarding agency in relation to performativity. *Bodies that Matter* was written with the aim of exploring "the materiality of the body" (ibid., p. ix), and partly based on the theory of Jacques Lacan (1991), Butler represents the body, not as a stable and consistent surface that is readily available for an inscription of identity, but as a continuous movement of boundaries. The body is in Butler's text not posited as a given *a priori*, but instead as something already "constructed" (1993, p. xi). However, Butler's suggestion of a constructed body only seems to heighten the above question of an agent in relation to body, gender, and performativity: who is the agent that constructs the body as a surface ready for an inscription of gender?

In order to clarify the issues on agency of the performative, gendered body, Butler uses the illustration of a judge in a court. When a judge makes a statement in a court setting, it is not the willful appropriation of the judge that generates a successful performative statement, for instance the act of proclaiming someone guilty or non-guilty. Instead, the performative statement only becomes successful by means of the judge iterating that very nexus of power which produced not only the judge, but also the will of the judge, to begin with: "Hence, the judge who authorizes and installs the situation he names invariably *cites* the law that he applies, and it is the power of this citation that gives the performative its binding or conferring power" (ibid., p. 225) [italics in original]. The judge is not an agent that may exercise legal power through his or her will, but the law precedes both the judge, the authority, and the statement, and they all appear as having power only insofar as they cite the law which has called them into being.

Butler's development of the concept of performativity in the years between writing *Gender Trouble* (1990) and *Bodies that Matter* (1993), resulted in a radical questioning of the relationship between the sexed and the gendered body, related to the conventional apprehension that materiality precedes, or grounds, language and culture.

Instead of treating the materiality of the body as existing prior to the sign, Butler sees the body as being "*posited* or *signified* as *prior*" (ibid., p. 30) [italics in original]. The idea of the body as generated by means of signifying practices, instead of having an existence prior to representation, constitutes the fundamental perspective where my embodied perception of *BIPED* is located. My perspective is that of a performatively embodied subject, constructed by a matrix of power which precedes both the subjectivity as well as the materiality of my identity as an observer. Butler explains the relationship between discursive signifying practices and subjectivity as follows:

"Where there is an 'I' who utters or speaks and thereby produces an effect in discourse, there is first a discourse which precedes and enables that 'I' and forms in language the constraining trajectory of its will. Thus, there is no 'I' who stands *behind* discourse and executes its violation or will *through* discourse. On the contrary, the 'I' only comes in to being through being called, named, interpellated, to use the Althusserian term, and this discursive constitution takes place prior to the 'I'; it is the transitive invocation of the 'I''' (ibid., p. 225) [italics in original].

In order to use Butler's definition of performative embodiment as a viewpoint from which I may look at *BIPED*, there are at least two questions that need to be addressed. First, it may be asked what kind of performative subjective embodiment constitutes the "I" that performs the speaking throughout this thesis; and secondly, what is the structure of the discourse, or power matrix, that calls, or invokes, that speaking "I" into being. Potentially, there is also a third issue, related to Hastrup's notion of theatre anthropology and performative ethnography as being grounded in embodied practices. The body, from Hastrup's perspective, is defined as a phenomenological zero-point of perception (1995, p. 95), but this performative ethnographic pre-objective body does not seem to correlate well with Butler's mimetic performative body. In order to solve the apparent contradiction between Butler's interpellated embodiment and Hastrup's body as a phenomenological zero-point, I will clarify in more detail how performance, anthropology, and performativity relate to each other in the light of the concept of the cyborg and the notion of the liminal.

(b) The body as a zero-point or mimesis?

Anthropological discourse and the ethnographic method have to some extent adopted elements from dramaturgy, performance studies, and performative linguistics. This merge between disciplines has given rise to theatre anthropology and performative ethnography. However, I am not intending to address Schechner's (2003) questioning

of how performance studies and and anthropology relate to each other. Rather, in light of my above discussion on performativity, there are two key concepts that I will extract from my previous overview of interdisciplinary relationships between dramaturgy and anthropology: From Goffman (1959), I derive the idea that an audience of a performance has to actively interpret and read signs, not only the signs that are consciously given by and actor, but also the signs that appear against the context of the social and personal setting within which the performance takes place. From Hastrup (1995), I will work on the assumption that there is to some extent a collapse between the subject-object relationship, so that there is no pure perspective or viewpoint, either as a performer, perceiver or as an external observer.

My perspective will differ from Hastrup's performative ethnographic viewpoint precisely in the above identified problematic status in her view of the body as constituting a phenomenological zero-point, implying that "There is simply no referential practice outside a corporeal setting, in which the individual agent is situated" (ibid., p. 95). While Butler's (1993) concept of an interpellated and mimetic body equally does not appear to give room for any referential practice outside of an embodied individual, there is one crucial difference between Hastrup's body and my perspective on embodiment. When Hastrup argues that there is no referential practice outside a corporeal setting, this means that referential practice is only possible through the presence of an individual and embodied agent. This implies the body as the *a priori* starting point, or zero-point, for any agency and intention to produce meaning: the body as the physical centre "from which the senses project themselves out into the world, and defines the horizon of the self" (Hastrup, 1995, p. 95). However, from the perspective, proposed by Butler (1993), that the body only achieves a position as an apriori by means of being signified as such, Hastrup's embodied zero-point instead appears as a performative citation, originating as an interpellation and sustaining its existence by means of continuously referencing an already existing discourse. In this case, there is no zero-point, no originating "body", but only different levels of abstract mimetic embodiment.

However, there is one problem pertaining to the concept of a discursively interpellated body. If the body is named and called into being by discourse, then there must be something outside of discourse, something which through the process of naming is called into being. In *Bodies that Matter*, Butler recognises the need to address the notion of an existence outside the realm of the concept, asking "what is the status of this 'outside'?" (ibid., p. 31) That question, leading towards a discussion of the boundary between concept and matter, as well as the nature of being outside of language, discourse, and concept, marks one of the limits, or outer boundaries, of my research project. The ontological question of what kind of being would exist outside the realm of performative embodiment, as an interpellated performative citation, is not part of my central objective. To pursue such a discussion would venture into a philosophy of metaphysics, removed from my practical study of performativity and the virtual in relation to the performance of *BIPED*. On the other hand, the mimetic body also opens up a range of possibilities regarding where such a body could be located. Below, I will explore two kinds of embodiment, the liminal and the cybernetic, both of which position the body as a site of ambiguity, existing on the thresholds between conventional social roles and categories. In my development of the liminal, I will mainly base my discussion on the work of the anthropologist Victor Turner (1982; 1986), who is exploring the notion of the "liminal personae" (Turner, 1969, p. 79) [italics in original], or the "threshold people" (ibid.). My discussion on the cyborg will be rooted in texts by Simon Shepherd (2004), scholar in dramaturgy and performance studies, and the American scholar Donna Haraway (Haraway and Goodeve, 2000).

(c) Betwixt observation

Turner (1969) defines the liminal condition as slipping through the network of classifications that normally locate states and positions in cultural space. "Liminal entities are neither here nor there; they are betwixt and between the positions assigned and arrayed by law, custom, convention, and ceremonial" (ibid., p. 79). Liminality often appears during rituals of social and cultural transition, such as "neophytes in initiation or puberty rites" (ibid., p. 80). During such a rite, an individual would typically go through three stages: first, a separation from the secular and mundane; secondly, a period of a sacred or ludic state of liminality in a temporary "communitas" (ibid.); and eventually, a reaggregation back into the normal society, but in a transformed state of being. Turner also applied the concept of the liminal to contemporary cultural practices in the form of the "liminoid" (1986, p. 9), which includes "innumerable types and genres of cultural performance (ibid.). The generic meaning that Turner gives to the the liminoid includes contemporary theatrical practices, where the three ritual stages of the liminal may be represented by a

separation in the form of a workshop, a liminal state as a public show or spectacle, and a reaggregation as a post-performance supper (ibid.).

The notion of the liminal state as slipping in between and eluding the network of classifications, states, and positions in cultural space does pose yet another theoretical problem, in addition to the previously identified apparent incompatibility between Hastrup's (1995) body as a zero-point and Butler's performativity (1993). The problem could be phrased in the following question: How is it possible to formulate a viewpoint that that merges Turner's liminality with Butler's performativity, if the interpellated subject all the time slips through the network of the matrix which the subject necessarily needs to cite in order to sustain its very existence? Moreover, how could such a subject be interpellated to begin with?

While the problematic status between the liminal and the performative has to do with the performative reliance on conventions versus the liminal avoidance of conventions, the Butler versus Hastrup issue is largely founded in Hastrup's reliance on Merleau-Ponty's (1962) phenomenology. Moreover, Merleau-Ponty is also referenced by Reynolds (2007) in her development of the notion of the virtual. Hence, as Merleau-Ponty to some extent shares the phenomenological tendency to rely on the idea of preobjective essences which supposedly ground culture and systems of representations, and which to a large extent defines the objectives of the phenomenological tradition (Husserl, 1965; Husserl and Gibson, 1931), there is a need to harmonise Merleau-Ponty's philosophy with Butler's performativity. However, Merleau-Ponty's idea of a pre-objective phenomenological field (Merleau-Ponty, 1962, p. 216), argued to have a "natural unity" (ibid., p. 227) between a perceiver and a phenomenon, does not easily correspond to Butler's (1993) mimetic body. A negotiation between the above, partly conflicting, viewpoints on the body would necessarily be partial, fragmented, and heterogeneous, which indeed corresponds to the inherent characteristics of the identity of the cyborg. Hence, I will below explore in more detail the possibility of continuing my study using a cybernetic perspective.

(d) Cybernetic identities

Cybernetics was already developed in the 1940s as a scientific and scholarly field of study by the mathematician and philosopher Norbert Wiener (Vallee, 2001). The term "cyborg", however, did not appear until the September 1960 issue of the journal *Astronautics*, where it was used by Manfred Clynes and Nathan Kline (1960) in an

article entitled "Cyborgs and Space". In Clynes and Kline's view, the cyborg consisted of a technologically modified human body, capable of sustaining life in outer space. Since the 1960s, however, the notion of the cyborg has diversified, and in the essay "Lolo's Breasts, Cyborgism, and a Wooden Christ", Shepherd (2004) gives several examples of various interpretations of the cyborg.

Some of the most well known cyborgs are products of science fiction movies, comics, and novels. Shepherd gives two examples of such science fiction cyborgs: "Robocop's human face in a machine body" and "William Gibson's humans with a range of implants" (ibid., p. 174). But Shepherd also points out a much more mundane version of the cyborg:

"Indeed, from a point of view that regards cyborgness as a functional dependency of body on machine and the imbrication of body with information systems, then everyone in the developed world is a cyborg" (ibid., p. 175).

Taking a more mundane approach to the definition of the cyborg, it may even be argued that the cyborg is not only a product of the "developed world" (ibid.), if by "developed", Shepherd means the modern, western, industrialised society. Lewis Mumford (2003), a historian of technology and science, gives an alternative perspective on technological, culture, and embodiment by his definition of the "megamachine" (ibid., p. 348). According to Mumford, the megamachine is a highly complex cultural construct, which first appeared on a large scale several thousand years ago in ancient Egypt. The megamachine was almost entirely constructed of organic human parts, which were brought together in a hierarchical organisation under the rule of an absolute monarch. Mumford argues that the megamachine constituted a model for all later specialised non-organic machines, and suggests that the Egyptian megamachine "remained the most advanced type of machine until the invention of the mechanical clock in the fourteenth century" (ibid.). Applying Mumford's description of organised human bodies, collectively acquiring the identity of a machine, to Shepherd's notion of the cyborg as a functional dependency of body on machine, the existence of the cyborg may not only be argued to stretch back thousands of years to ancient Egypt. Additionally, the cyborg also appears as an intersubjective entity, constituted by a social hierarchical ordering of bodies, which, in Butler's terms, are arranged by, and through their actions cite, an existing cultural matrix of power.

The scholar Donna Haraway (1991) gives further support to the idea that a cyborg neither must be composed of the kind of technology that supports outer space travel, nor the "monsterification" (Clyne, in Shepherd, 2004, p. 175) of the cyborg generated by science fiction. In an interview by Thyrza Nichols Goodeve (Haraway and Goodeve, 2000), Haraway was asked to comment upon the possibility of establishing a thematic connection between a selection of her writings (1991; 1997), and Haraway responded:

"From the beginning and to the present, my interest has been in what gets to count as nature and who gets to inhabit natural categories. And furthermore, what's at stake in the judgment about nature and what's at stake in maintaining the boundaries between what gets called nature and what gets called culture in our society. And how do the values flip? How does this very important dualism in our cultural history and politics work between nature and society or nature and culture?" (Haraway and Goodeve, 2000, p. 50).

One way of reading Haraway's above response to Goodeve's question is that the cybernetic theory developed by Haraway mainly concerns the cultural constructs of boundaries between technology/culture and notions of nature. Thus, Haraway does not prescribe a definition of a cyborg as much as she presents the cyborg as a necessary construct, perhaps even a side effect, of already existing, but continuously changing, cultural boundaries and sites of knowledge/power. In this sense, the cyborg shows strong performative characteristics, in Butler's (1993) sense of the word, as the cyborg comes into being through an ongoing process of naming and classification, performed within an already existing social matrix of power.

Yet another cyborg construct that Shepherd (2004, p. 170) highlights is related to the embodied training practices of the Japanese theatre-maker Tadashi Suzuki. One method in Suzuki's training regime consists of stamping the feet on the ground. Through strong, rhythmic stamping over a sustained period of time, the actors "come to understand that the body establishes its relation to the ground through the feet, that the ground and the body are not two separate entities" (Suzuki, in ibid., p. 171). Ordinarily, the relationship between the body and the ground is taken as a given. Gravity, if even considered, appears as an irreducible force, and the weight carried by the feet, a natural and unavoidable necessity of human existence. However, an actor who experiences Suzuki's training acquires "a very different sense of her existence on stage from what she has in daily life" (ibid.). To the perception of Suzuki's actor, even the relationship

between a body and the ground is revealed as something constructed, the result of a process of acculturation. Mundane performances such as standing, walking, or running stand out as a particular mode of embodiment that is interpellated by a culture of training techniques. The perceptual awareness of Suzuki's actor is very close to the performative culture/nature synthesis of the cyborg.

The idea of human movement as something thoroughly culturally constructed is also proposed by the movement analyst Carol-Lynne Moore (1988). Moore refers to the anthropologist Edward T. Hall's (1976, p. 23) idea that evolution is not only of a biological character, but also cultural, and takes the form of "extension systems", which includes cultural, scientific, and technological artefacts. According to Moore, it is possible to see "movement as one of the primary extension systems of *Homo sapiens*" (1988, p. 74) [italics in original]. When defined as a cultural extension system, movement would have the same fundamental mode of being as any other extension system, such as tools, clothes, architecture, or technological means of transportation and communication. The various extension systems only differ in their relative level of abstraction. Moore suggests that "it is the degree of abstraction, not its presence or absence, that differentiates one extension from another" (ibid., p. 78).

The ballerina of the western classical ballet tradition is a character that shows many strong features of cybernetic performativity. The ballerina is interpellated by a preindividual cultural matrix of power which aims to produce the ballerina as "an effect of disembodied female perfection" (Shepherd, 2004, p. 181). The matrix utilises various methods in the production of the ballerina. One method is a sustained and rigourous scheme of bodily training, which gradually shapes a mundane body into a ballerinabody. However, the bodily training of the ballerina's muscles and tendons is not enough to achieve the full range of the extension system that comprises the ideal of classical ballet, which is the appearance of the nymph, "woman as non-body" (ibid.). The training is complemented by the use of point-shoes, which makes it possible for the ballerina to minimise her contact with the stage to that of a single point, and in doing so, "transcending the earth-bound limits of human physicality" (ibid.). Eventually, the interpellated ballerina-subject cites the discourse that has called her into being through stage performances of the ballet repertory. It appears that there is a vast diversity of cybernetic identities, including the above examples of the self-sustaining space traveller, the monstrous science fiction figure, the ballerina, as well as everyone in the developed and ancient world that may be identified as a synthetic construct of nature and culture. Because of the multiple heterogeneous characteristics of the cyborg, there is a need to identify precisely how a cybernetic viewpoint would contribute to resolve the identified problematic relationships between the performativity of Butler (1993), the liminality of Turner (1969), and the phenomenology of Merleau-Ponty (1962).

(e) The performative liminality of the cyborg

Shepherd's (2004, p. 181) example of the ballerina can be interpreted as exemplifying a partial overlap between cybernetics and performativity: The ballerina's dance *en pointe* is both a performative citation of the balletic tradition, as well as a cybernetic identity of body/technique/tools, exemplifying a particular establishment of boundaries between what counts as nature and culture, and demonstrating that "Embodiment is significant prosthesis" (Haraway, 1991, p. 195). However, just as cybernetics and performativity could be seen as partially overlapping, it is equally possible to establish a close relationship between performativity and liminality.

I have previously described the liminal as a condition that slips between established social roles and systems of classification. While that description represents some of the main characteristics of the liminal, it misses out the fact that in living practice, liminality rarely appears as an absolute. Instead, the liminal comes in various degrees, and its evasion of the conventional and the mundane is only partial. Turner exemplifies how the liminal and the conventional may interact during carnivals and festivals such as Mardi-Gras or Carnival-Carême:

"Public liminality is governed by public subjunctivity. For a while almost anything goes: taboos are lifted, fantasies are enacted, indicative mood behaviour is reversed; the low are exalted and the mighty abased. Yet there are some controls: crime is still illicit; drunken bodies may be moved off the sidewalks. And ritual forms still constrain the order and often the style of ritual events" (1986, p. 102)

In Turner's description of public liminality, conventions are not completely abandoned. Rather, there is an ambiguity of ordinary social structures and positions of authority. To some extent, the carnival is unconventional, but there is still a clearly recognisable presence of basic cultural stratification; as Turner highlights, extreme drunkenness and criminal behaviour are not welcome. The ambiguous and partial merge of the conventional and unconventional is also apparent in liminal performances belonging to the genre of satire. According to Turner, during public liminality, "the vices, follies, stupidities, and abuses of contemporary holders of high political, economic, or religious status may be satirized, ridiculed, or contemned" (ibid.).

Satire is one example of liminal performance that has distinctive performative characteristics. During a satirical performance, social characters are portrayed in a disproportionate and/or distorted way. The satire could thus be understood as a citation of the character that is targeted by the act. However, there are limits as to how far a satire may distort the subject that is quoted. If the satirical citation gets too disproportionate, there is a risk that the performative act would fail, as an audience may not be able to conceptually link the performance to the subject or public character upon which the satirical act intended to comment. Thus, the satire exemplifies Derrida's (1982) notion of the performative as a general iterability, including the risk of failure that is inherent to systems of representation.

The ambiguity of public liminality, appearing as a layering, or play, of the conventional and the in between, is also present in satire. While the satire performed under the liminal condition is free to undermine, judge, ridicule, or criticise a particular subject of authority and power, the satirical act receives its critical powers precisely through iterations of the very same matrix of power that also called forth the character of authority who is criticised through satire. Moreover, the liminal condition is always framed by a phase of separation and reaggregation. Thus, the liminal itself is discursively framed and called into being on particular occasions, and the liminal validates itself by means of citing the interpellative discourse as a performative iteration of ambiguity. Hence, liminal satire simultaneously turns discursive power against itself, in a critique of the authoritative citations of the discourse. Yet, the satirical act necessarily conforms to that very same discourse, as it proves the source of power not only for the subject that is criticised, but also for the ambiguity of the liminal, since they both exist as an interpellated performative iteration of that very same matrix of power. It is precisely in the above identified ambiguity in the relationship of the conventional and the in-between that the liminal and the performative merges with the cyborg, or more specifically, with the way in which the cyborg has been defined by Haraway (1991). In *Simians, Cyborgs, and Women: The Reinvention of Nature*, Haraway introduces the chapter "A Cyborg Manifesto" with the words:

"This chapter is an effort to build an ironic political myth faithful to feminism, socialism, and materialism. Perhaps more faithful as blasphemy is faithful, than as reverent worship and identification" (ibid., p. 149).

In those two very first sentences, Haraway summarises the central features of her view on the cyborg identity. The cyborg is ironical, blasphemous, yet faithful, but the cybernetic faithfulness is ambiguous and always partial. Haraway describes the cyborg as the illegitimate offspring of militarism, patriarchal capitalism, and state socialism, "But illegitimate offspring are often exceedingly unfaithful to their origins" (ibid., p. 151). This is the paradox of Haraway's cyborg: a partial faithfulness, which always turns unfaithful towards its origins. "The cyborg is resolutely committed to partiality, irony, intimacy, and perversity. It is oppositional, utopian, and completely without innocence" (ibid.). The ontology of Haraway's cyborg has no pure origin or genesis, and it does not expect a final resolution into a wholeness. "The cyborg would not recognize the Garden of Eden; it is not made of mud and cannot dream of returning to dust" (ibid.). However, different as the ontology of the cyborg may be from human ontology, the cyborg does not isolate itself from the sphere of humanity. Instead, it transgresses boundaries and establishes even tighter connections than were ever desired:

"Far from signalling a walling off of people from other living beings, cyborgs signal disturbingly and pleasurably tight coupling. Bestiality has a new status in this cycle of marriage exchange" (ibid., p. 152).

Based on Haraway's description of the cyborg, it is possible to identify both liminal and performative characteristics in the cybernetic character. The liminality of the cyborg may be exemplified through its fractured identity. While each fraction of the cyborg is mundane and conventional, the cyborg challenges its conventional origins by means of transgressing the boundaries between the parts, and by coupling certain parts closer to each other than normal, like a carnival where the body, the human, the animal, and socially stratified positions of power are conflated, embedded in levels of noise and distortion. The cyborg slips through ordinary systems of classification by means of transgressing boundaries and collapsing dichotomies, embracing that which convention deems as contradictory:

"a cyborg world might be about lived social and bodily realities in which people are not afraid of their joint kinship with animals and machines, not afraid of permanently partial identities and contradictory standpoints" (ibid., p. 154).

The liminal cyborg exists across cultural borders and strata, not within them, and the cybernetic perspective embraces contradiction, refusing to be restricted to one or the other. Even the contradictions within a cyborg, however, are only partially embraced, as the cyborg is wary of wholeness. To Haraway's cyborg, the distinction or unification of established dichotomies such as man/woman, human/machine, and human/animal are not essential. Instead, the cyborg aims to pollute established categories by means of filling the boundaries, relationships, and pathways of communication with distortion and signal/noise ratios that cancel out conventional modes of communication and stable identities. The identity of Haraway's cyborg is continuously and performatively rewritten. As Butler's gendered identity was "inscribed on the surface of bodies" (1990, p. 186), so is inscriptive writing "pre-eminently the technology of cyborgs, etched surfaces of the late twentieth century" (Haraway, 1991, p. 176). The cyborg is a plurality of performative iterations, fragments of inscriptions, written across a plurality of embodied and non-embodied surfaces, each part interpellated through a unique discourse, and potentially contradictory to each other. As a result, the cybernetic identity consists of multiple iterations, illegitimately assembled and continuously reassembled as noise-saturated fields of distorted, liminal signification, an identity that practises the condition of performative cybernetic liminality.

III. Conclusion

The cybernetic perspective which I have developed in this chapter is a hybrid position, the constantly shifting place of a trickster character which does not wholeheartedly commit to any fixed position. The cybernetic condition is liminal, falling outside of established positions, yet it performatively iterates conventional discourse. It is the viewpoint of a subject who is trained in the tradition of European dance theatre practice, but who fragmentarily cites and partially assimilates discourses on phenomenology, gender studies, linguistics, and dance critique. Yet, there is one border, or limit, that the cybernetic perspective of this study will not aim to transgress, a border which was exemplified in Butler's (1993, p. 31) questioning of the discursively interpellated materiality of the body: "what is the status of this 'outside'?" The quick answer to Butler's question, addressed from the liminal state of the performative cybernetic perspective of this thesis, is that there is no outside of discourse. The cybernetic ontology is different to the human ontology. Whereas the conditions of human perception, from a phenomenological perspective, originate in the pre-objective and pre-subjective field, or horizon, of phenomena, the cybernetic horizon of phenomena constitutes a field of systems of representation. However, just like the human phenomenal field, the cybernetic horizon does not contain any intelligible information or communication, but a field of white noise with no distinguishable or intelligible signal. The question is: what kind of algorithms, filters, and modulators are used in order to process the noise and produce meaningful data, and how may already existing, conventional data be hacked and modified?

In the next chapter, I will both look at some attempts to establish meaningful data, and efforts to challenge those attempts. The establishment of meaning will mainly be represented by the vitalist tradition of dance practice and dance critique, which for several decades during the twentieth century exercised a prominent influence on American and European modern theatrical dance. The challenge to that vitalist production of meaning will primarily consist of an overview of some of the choreographic work produced by Merce Cunningham, who played an important historical role in spearheading a new generation of radical dancers and choreographers, many of which took part in the Judson Dance Theatre in New York during the 1960s.

Chapter 2: Vitalism and the virtual

I. Introduction

This chapter consists of a critique, or a cybernetic hack, of three influential theories within the vitalist tradition of dance critique: Curt Sachs (1937), John Martin (1933b; 1946), and Susanne Langer (1953; 1957). Centred on Merce Cunningham's oeuvre, and in particular his work *Story* (1963), my objective is to demonstrate how Cunningham partly has resisted the vitalist tendency to see movement as inherently expressive, while acknowledging that movement always provides the potential to be read, or perceived, as representational or expressive. The aim of this investigation into vitalism and Cunningham is threefold: First, to demonstrate in what way Cunningham exemplified how the vitalist ideas of expressiveness may be challenged, yet how he celebrated perception of movement as a rich source for the subjective production of meaning; second, to illustrate the limits of the kind of virtualities that have been developed within, or derived from the vitalist tradition; and third, to suggest that a re-reading of the vitalist and phenomenological foundations of the analysed definitions of the virtual provides a fruitful ground for a development of the notion of the virtual in relation to perception of movement.

Towards the end of the chapter, I will introduce some elements from the philosophy of Gilles Deleuze (1994). The reason for this is that his theory on the virtual to a large extent is derived from the phenomenology of Henry Bergson (1908). The common phenomenological ground between the virtualities based on vitalism and Deleuze's virtual gives a rich source of material which I will refer to in subsequent chapters.

II. An origin of dance

According to Susan Leigh Foster (1988), dance scholar and professor in choreography, three of "the most influential theories of dance composition" (ibid., p. xvi) of the twentieth century were written by the musicologist Curt Sachs (1937), the dance critic John Martin (Martin, 1933b), and the philosopher Susanne Langer (1953; 1957). Foster classifies all three theories as belonging to the vitalist tradition, situating the origin of dance in early, prehistoric, human gestural attempts at communication. In Foster's description of the vitalist perspective, dance offered domesticated, suppressed, and overly civilised human citizens a return to a vital sense of energy, a partially lost and

original sense of wholeness, as well as bringing forth "a luminous symbol of unspeakable human truths" (Foster, 1988, p. xvi).

From the perspective of the scholar in French and dance Dee Reynolds (2007), vitalism corresponds to a certain attitude that grew particularly strong in Germany during the early years of the twentieth century, where it merged with German idealism. The vitalists were often highly critical of modernity and technological development, and attempted to resist the perceived negative effects of modernity, capitalism, and bureaucracy. Through the performance of embodied rhythmical practices, such as walking in nature, gymnastics, and dance, the vitalists believed that they could generate a stronger and more genuine sense of identity, based on particular interpretations of concepts of life, nature, and the body. For instance, "Life' came to be seen by many as a valued human attribute under threat and in need of defence against repressive social customs, as well as the assaults of industrialisation, which overwhelmed the individual" (ibid., p. 19).

One example of a vitalist artist who worked in Germany before the Second World War was Rudolf Laban (1926). The dance practitioner and scholar Valerie Preston-Dunlop (1998a) demonstrates how Laban's artistic practices in Germany were to a large extent characterised by fear of the impact of modernity on the human condition. During the years 1922-1924, Laban created dance work such as *Robot* and *Homunculus* (The Artificial Man) which depicted the supposedly negative influence of "how modern values mechanised men" (ibid., p. 85). During the same period, Laban also created the work *Mönch*, which glorified spiritual values and an integration of mind, body, and spirit. Instead of showing bizarrely mechanised movements, as in as *Robot* and *Homunculus*, Preston-Dunlop describes *Mönch* as "an ecstatic dance using the religious forms of blessing, obeisance and praise, with which the three spatial planes are connected" (ibid.).

Prior to *Mönch*, Laban had already in 1917 choreographed the work *Song to the Sun*, which was a mixture of open air theatre and ritual, filled with mythical and mystical concepts of nature and life. The audience was sitting on the hillside of Monte Verita, near Ascona in Switzerland, and the mise en scene consisted of the sun, night, stars and the moon. The performance started on the evening of 18 August, and the first part, "Dance of the Setting Sun", began at 18.30. Later in the evening, at 23.00, the second

part started, called "Demons of the Night". Finally, the following morning, at 06.00, the work was completed with a third section, "The Rising Sun" (ibid., p. 47). Laban created *Song to the Sun* as part of his involvement in a vitalist colony located at Monte Verita, consisting of a heterogeneous collection of people and artists, united by a feeling of being suffocated by metropolitan life. The group experimented in finding ways of living which they regarded as being more harmonious, natural, and spiritual. In order to reach their aim, the colony explored a wide range of practices, such as: "Nature cures, vegetarianism, psychoanalysis, a refreshing look at the body, nudism and sexuality, together with various approaches to spirituality, including freemasonry" (ibid., p. 28). Laban's adverse reactions to modernity and his tendencies to embrace the mythical, however, only represent one particular aspect of vitalist attitudes during the first half of the twentieth century.

A scholarly vitalist perspective could be seen in Sachs's (1937) *World History of the Dance*, which focuses on how dance is rooted in involuntarily expressions of emotions, and argues that the earliest history of dance must be traced, not in ethnology or prehistory, but in "the well known dances of the higher animals" (ibid., p. 9). In Sachs's view, the origin of dance is purely physiological, and "All dance is originally the motor reflex of intense excitement and of increased activity" (ibid., p. 139). The suppression, or degeneration, of that original and vital physiological excitement, is not primarily linked to modernity, but instead to a process of acculturation which was already in full swing during the Late Middle Ages. Dated from the fourteenth and fifteenth centuries, there are many historical accounts on how people in Christian European societies were bursting out in "pathogenic excesses" (ibid., p. 251) of dance. While those outbursts caused a lot of spiritual concern among the Christian churches and the priesthood at the time, Sachs presents the following explanation:

"What is revealed in these dances is not a 'relic' of 'paganism', but a piece of ecstatic inner life, which since the Stone Age has been disguised and concealed through innumerable racial influxes but never extinguished, and which must break out through all restraints at the favorable moment" (ibid., p. 253).

In contrast to Sachs's and Laban's above views on dance as a free discharge of restrained inner energy, resisting cultural tendencies to cancel out the ecstatic inner life

of a human being, Langer (1953) represents a different mode of vitalism. In fact, Langer is highly critical both of Sachs and Laban:

"Not only the sentimental Isadora, but such eminent theorists as Merle Armitage and Rudolf von Laban, and scholars like Curt Sachs, besides countless dancers judging introspectively, accept the naturalistic doctrine that dance is a free discharge either of surplus energy or of emotional excitement" (ibid., p. 177).

Langer argues that the proof provided by Sachs, supporting his idea with regard to the origin of dance by means of referring to the behaviour of animals, "is, of course, no proof at all, but a mere suggestion" (ibid., p. 179). While Langer acknowledges that dance movements to some extent are, on behalf of the performer, kinetically experienced as "vital movement" (ibid., p. 174), she proposes that the actual performance of a dance movement, as well as a viewer's understanding of that movement, is governed by "*imagined* feeling" (ibid., p. 181) [italics in original]. In Langer's view, the faculty of imagination, both in the performer and in the viewer, generates in relation to dance a primary illusion which is understood as "virtual powers" (ibid., p. 169). The relationship between a movement and its expression is by Langer described as "actual movement, but virtual self-expression" (ibid., p. 178) [italics in original]. When this distinction between the actual and the virtual is ignored, such as in Laban's theory, there are "no actualities left in it at all, no untransformed materials" (ibid., p. 187).

(a) Virtual expressions

As an alternative to the vitalism of, for instance, Sachs and Laban, Langer (ibid.) argues that all art is an expression of symbolic form, in the sense that each art form produces in the perceiver an imaginary primary illusion. There are several different kinds of primary illusions, each illusion belonging to a specific artistic form of expression, and corresponding to a particular notion of the virtual. For instance, the plastic arts - which in Langer's case mainly consist of pictorial art, sculpture, and architecture - all relate to the primary illusion of virtual space. However, there are variations in terms of what kind of virtual space each plastic art form express. For instance, while pictorial art generates the virtual space of a "scene" (ibid., p. 86), sculpture expresses a "volume" (ibid., p. 88), and architecture produces the virtuality of an "envisagement of an ethnic domain" (ibid., p. 100) [italics in original].

Based on Langer's systematic classification of certain specific virtualities belonging to particular artistic practices, it is possible to draw two conclusions regarding her concept of the virtual: First, each virtuality is a strictly defined and framed concept that does not apply beyond the boundaries that Langer sets up for its corresponding particular artistic practice; and secondly, Langer's virtuality seems to be based on a causality, where any particular virtuality is an effect that is caused by an artistic practice.

The strict boundaries that Langer sets up between her virtualities could be exemplified by her perception of colour in two different art forms, such as painting and architecture. Even if a painting and an architectural construct were to use an identical colour quality, in Langer's view, it would still be a mistake to directly compare the qualities of the two artistic practices without paying attention to their respective virtual distinctions. As Langer explains, "Having a material in common does not link two arts in any important way. Color is one thing in a house and quite a different thing in a picture" (ibid., p. 102).

The reason why Langer stresses the importance of maintaining the virtual distinctions between different kinds of art could be explained by her view of perception, reading, and understanding of the arts. According to Langer, a person who is trained in the plastic arts, expressing the primary illusion of virtual space, would most likely be completely at a loss when perceiving dance: "Indeed, he is apt to judge some other arts, such as ballet or theater, entirely from the standpoint of plastic form, which is not paramount in their realms at all" (ibid.). To judge or criticise dance on the basis of the primary illusion of the plastic arts, virtual space, would in Langer's view be most inappropriate (ibid., p. 172).

In her aim to identify a structure of clear and "deep divisions among the arts" (ibid., p. 103), Langer identifies the primary illusion of dance as "gesture" (ibid., p. 174) [italics in original]. In contrast to the plastic arts, the gestures of dance do not express virtual space, but "a virtual realm of Power - not actual, physically exerted power, but appearances of influence and agency created by virtual gesture" (ibid., p. 175). Noticeably, in spite of Langer's meticulous separation of the virtualities of different art forms, even subdividing the different virtual spaces expressed within the plastic arts, all

dance forms, ballet as well as various kinds of modern dance, are represented as producing the same generic form of virtual power (ibid., pp. 169-187).

Langer's combination of a fixed structural rigidity, where each virtual expression is permanently, uniquely, and irrevocably attached to a specific art form, together with her use of generalised concepts of the virtual, particularly in relation to dance, leaves Langer's theory open to critique. One example of a critique of Langer's theory of the virtual is in the work of Preston-Dunlop (1981). In her development of a system of analytical tools for dance, referred to as Choreutic Units and Manner of Materialisation (CHUMM), Langer's notion of virtual space is indeed applied to dance. While Preston-Dunlop explains that the "Virtual' is used here in the way that S. K. Langer uses it, throughout Feeling and Form, to distinguish actual from illusory" (ibid., p. 30), the distinctions set up by Langer between the various kinds of virtualities are treated rather fluidly by Preston-Dunlop. For instance, a conflation between Langer's notion of virtual gesture in dance and virtual space is evident in Preston-Dunlop's argument that "The matter of actual and virtual lines is fundamental to dance. The creation of virtual spatial forms is part of the dancer's art" (ibid., p. 49), and "A dancer's phrases have actual shape and, additionally, virtual shapes. As he gestures over his head in an arc, he may expand the arc, radially, so that it spills over into the shared space" (ibid.). A dance analysis based on the CHUMM system is thus a study of "virtual spatial forms" (ibid.), rather than Langer's virtual powers.

Langer's definition of dance as an expression of virtual power has also been criticised by the dance historian Selma Cohen (1981). As part of a reading of the Dance of the Sugar Plum Fairy from the classical ballet *Sleeping Beauty* (1890), choreographed by Marius Petipa, Cohen surveys a wide range of analytical approaches to dance, including Langer's work *Feeling and Form* (Langer, 1953) and *Problems of Art* (Langer, 1957). Asking what the Dance of the Sugar Plum Fairy means, Cohen demonstrates the inadequacy of rigid and inflexible approaches to dance, such as Langer's strict categorisation of art as symbolic virtual form. Additionally, Cohen highlights the importance of subjective perception and intentionality on behalf of the creator in her reading of dance.

III. A virtual breakdown

Cohen (1981) suggests how the Dance of the Sugar Plum Fairy may relate to Langer's (1953) argument from *Feeling and Form* that dance is "a free symbolic form, which

may be used to convey *ideas* of emotion, of awareness and premonition" (Langer in Cohen, 1981, p. 281) [italics in original]. Cohen's proposal is that the kind of emotion, awareness, or premonition that may be conveyed in the Dance of the Sugar Plum Fairy is "a disposition of pleasantly warm friendliness" (ibid.). She also refers to a statement by Langer (1957) in *Problems of Art*, where Langer further specifies the characteristics of what kind of ideas of emotion that are expressed in dance: "the rhythms and connections, crises and breaks, the complexity and richness of what is sometimes called man's 'inner life'" (Langer in Cohen, 1981, p. 281). Applying Langer's definition of dance, Cohen concludes that ideas of rhythms and connections are indeed present in her reading of the Dance of the Sugar Plum Fairy, "though we may look in vain for crises and complexity" (ibid.).

Cohen's critical appraisal of Langer seems to point to some inherent limitations in her theory of dance with its characteristic primary illusion. Further, as Cohen comments upon Langer's (1953, p. 182) assertion that the "feeling of the whole work is the 'meaning' of the symbol, the reality which the artist has found in the world and of which he wants to give his fellow men a clear conception" (Langer in Cohen, 1981, p. 281), Cohen asks, perhaps ironically: "But isn't this claiming rather much for a dance of a simple, friendly sugar plum fairy?" (ibid.). Cohen's question regarding the simplicity of the Sugar Plum Fairy implies that she is indeed suggesting that the meaning inherent to the Fairy's dance may go well beyond Langer's definition of dance as conveying ideas of emotions, feelings, or the complexity and richness of (wo)man's inner life. In fact, Cohen instead appears to propose the idea that dance analysis is by no means a simple task: it requires critical tools that extend beyond Langer's ideas. Hence, she turns to a theory of dance by the American philosopher and aesthetician Nelson Goodman (1968), who suggests that dance may be defined as a polarised structure of denotative traditional dances and modern exemplifying, or connotative dances.

Clustered around one of Goodman's two poles are the denotative types of dance, involving "versions of the descriptive gestures of daily life... or of ritual" (Goodman in Cohen, 1981, p. 283), and around the other pole is the kind of dance that exemplify, or connote, rather than denote. Whereas the denotative dance modes may carry overt social messages, meaning, symbolic practices, and narratives, the exemplifying or connotative dances would have a more abstract character. According to Goodman,

exemplifying abstract forms of dance would contain "not standard or familiar activities, but rather rhythms and dynamic shapes [which] may reorganize experience, relating actions usually disassociated or distinguishing others not usually differentiated, thus enriching allusion or sharpening discrimination" (Goodman in ibid.).

While Goodman's classification of denotative versus exemplifying dances may seem simple, there is a hidden challenge in Goodman's theory, strongly related to issues of subjectivity and interpretation. Cohen points out that "Wisely, Goodman does not insist that dance is limited to one or the other of these two types exclusively" (ibid.), and continues to discuss the historical work *Ballet Comique de la Royne* (1581), choreographed by Balthazar de Beaujoyeulx for the marriage of Queen Catherine de Médicis' sister, Marguerite de Lorraine, to the Duke de Joyeuse. The following quote is an extract from Beaujoyeulx's own description of the last entrée of the ballet:

"they danced the grand Ballet of forty passages or Geometric figures. These were exact and considered in their diameter, sometimes square, now round, and with many and diverse forms, and so often triangular, accompanied by some square and other small figures... Everyone believed that Archimedes could not have better understood Geometric proportions" (Beaujoyeulx in Cohen, 1974, p. 19).

As Cohen points out, the *Ballet Comique de la Royne* may appear as an abstract work to the contemporary reader, since the choreography seems to be filled with rhythms and dynamic shapes of embodied geometric figures. If Beaujoyeulx's ballet is interpreted as an abstract work, it could be classified as one instance of Goodman's exemplifying dances. However, this would be deceptive, since the audience assembled at the sixteenth century French court of Queen Catherine de Médicis, "knew that the figures were symbolic of the mutation of the elements and the seasons, and the choreographer had no need to explain conventions that were so well understood by his contemporaries" (1981, p. 284). Thus, for Beaujoyeulx's audience, the *Ballet Comique de la Royne* was indeed denotative or, in Cohen's description, "representational" (ibid.).

The above example demonstrates that the meaning and character that is given to a dance performance is intimately connected to processes of perception and interpretation by an audience. The audience attending Catherine de Médicis' court had a particular perspective and understanding of how the world was operating, and from this

perspective the geometric patterns of Beaujoyeulx's ballet represented mutations of the elements and the seasons. But how does Goodman's dichotomy relate to the Dance of the Sugar Plum Fairy? Would the prevalent geometric patterns and highly stylised vocabulary that is present in the Sugar Plum Fairy solo constitute yet another instance of a denotative dance, in addition to *Ballet Comique de la Royne*, or would the Sugar Plum Fairy's dance rather be of an exemplifying kind? Cohen suggests the following:

"By stretching the term a bit we may see some resemblance to ritual in the strict symmetry, the clear-cut formal patterns, the apparent lack of personal spontaneity. But we would be at a loss to say what kind of ritual was being represented, other, perhaps, than the ritual of a ballet dancer dancing. Still though her individual movements seem to belong to the category that Goodman describes as exemplification of rhythms and dynamic shapes, the dance as a whole seems to refer to rather personal, if not very individual, qualities - graciousness, friendliness" (ibid.).

Cohen's reading of the Dance of the Sugar Plum Fairy seems to suggest that neither Langer's nor Goodman's description of dance comprehensively manages to capture the meaning or essence of the dance as she perceives it. One significant point that Cohen extracts from her analysis of the Dance of the Sugar Plum Fairy, and from her references to Langer's and Goodman's theories, is that the subject of perception in relation to choreographic practices is highly complex. On contemporary theatre stages, "a multiplicity of choreographic approaches coexist, and we had better beware of asking any one of them for a kind of meaning more appropriate to another" (ibid., p. 283). But Cohen is not alone in asking for an openness beyond Langer's structures of the virtual in relation to perception of choreographic practices. Maxine Sheets-Johnstone (1979) is another dance scholar who has responded to Langer's theory of the virtual with an awareness of its inherent limitations.

(a) A challenge to theory

In both *The Phenomenology of Dance* (ibid.) and "An Account of Recent Changes in Dance in the USA" (1978), Sheets-Johnstone effectively demonstrates Cohen's idea outlined above that a theory of dance perception, or a production of meaning from dance, cannot exist independently of the particular choreographic approach that the theory claims to address. Rather than prescribing any particular meaning to dance, Sheets-Johnstone (1979) critiques and extends her own approach in the first 1966 edition of *The Phenomenology of Dance*, in light of developments of dance, such as the

advent of post-modern dance. As part of the introduction to the second 1979 edition of *The Phenomenology of Dance*, she states that:

"There are further revisions I would make in respect to some absolute statements which appear in the book and which presume an unchanging world of dance, as, for example, the statement that in composing a dance, the student does not work with movement *qua* movement. Of course, within the framework of symbolic forms of dance, with their emphasis upon form and not movement, the statement is understandably sound. But other kinds of dance exist today and those kinds of dance do involve working with movement *qua* movement; in fact, that is their whole focus" (ibid., p. xiii) [italics in original].

One of the dance practitioners who stimulated the development of a notion of dance as movement *qua* movement was Merce Cunningham, and in addition, a group of experimental dance artists and choreographers involved in the Judson Dance Theatre together with Cunningham in New York during the 1960s (Banes, 1994, p. 207). Thus, it may be argued that the theoretical revisions suggested above by Sheets-Johnstone, as a response to choreographic practices up until 1979, could already have been identified in 1966, by the time the first edition of *The Phenomenology of Dance* was published. In fact, the foreword of Sheets-Johnstone's work (1979) was written by Merce Cunningham as early as 1965, where he expresses his idea of dance as an activity preoccupied by movement rather than symbolic form: "Dance is movement, and its opposite, in time and space" (Cunningham in ibid., p. vii).

Not only Sheets-Johnstone has recognised the importance of the new choreographic practices advocated by Cunningham and his contemporaries. Foster (1988) accordingly contrasts the vitalist theories of Sachs (1937), Martin (1933a), and Langer (1953) to the choreographic practices of Cunningham, who seemed to offer an alternative to the idea of movement and dance as reclaiming a lost sense of original wholeness and vital life force. Cunningham's dances instead appeared to suggest that human feeling and movement "could and should be seen as separate realms of events, whose correspondences were haphazard at best" (Foster, 1988, p. xiv). In *Merce Cunningham: The Modernizing of Modern Dance*, the dance scholar Roger Copeland (2004) seems to agree with Foster's position on Cunningham. There, he contrasts contrasts Cunningham's work to that of Martha Graham (1992), who subscribed to many of the vitalist ideas, such as the belief that dance and movement revealed truth, deep emotions, and had the power to create a truer sense of identity. Copeland describes the

choreographies of Cunningham, on the other hand, as celebrating a cerebral, fragmented, postmodern, and urbanised experience of life (2004).

The Italian arts critic Germano Celant (2000) also takes this view, arguing that Cunningham gave movement itself an identity of objectified independence. As a result, movement could be treated as a tangible substance in its own right, and the objectification of movement in Cunningham's work reached such a level that it became possible to treat each movement as completely arbitrary and exchangeable. Hence, choreography could be constructed as sequences of arbitrary movements, arranged into their particular temporal and spatial patterns by means of chance (ibid.).

Cunningham's attitude towards movement, and the concept of indeterminacy between movement and music, was heavily influenced by the composer John Cage (Jordan, 1979). The collaboration between Cunningham and Cage stretches back to as early as in August 1942, with the performance of *Credo in Us*, at Bennington College (Lesschaeve, 1999, p. 202). Cage composed the music, and the movements were co-choreographed and danced by Cunningham and Jean Erdman, who, like Cunningham, was one of the dancers in Martha Graham's company (Helpern, 1999). Two months later, in October 1942, Cage and Cunningham performed a solo dance called *Totem Ancestor* in New York (Lesschaeve, 1999, p. 202), and in April 1944, they performed a series of dance solos in New York, including *Triple-Paced*, *Root of an Unfocus*, *Tossed as it is Untroubled*, *The Unavailable Memory of*, and *Spontaneous Earth*.

Cunningham and Cage were active in terms of producing dances throughout the 1940s, and the above examples only highlight a small number of their total output (ibid.). Due to the fervent activity of the two artists, it is not surprising that the dance critic Sally Banes (1994), claims that Cunningham "moved in the radical vanguard of modern dance at least since 1951, when he first used chance methods in his choreography" (ibid., p. 103). Additionally, in 1964, two years prior to the publication of the first edition of Sheets-Johnstone's *The Phenomenology of Dance* in 1966, the Cunningham dance company embarked on an extensive world tour. One of the repeatedly performed choreographies during the tour was *Story* (1963), a work that clearly demonstrates Cunningham's interest in indeterminate relationships between bodies, movements, matter, time, and space.

(b) Story telling

In *Story* (1963), Cunningham used chance and indeterminacy more extensively than he had ever done before (ibid.; Jordan, 1979). Instead of having a set choreographic structure, *Story* consisted of eighteen sections, which were rearranged for every performance. The structure within any particular section could also be changed by the dancer. Cunningham described the choreographic structure of *Story* as follows:

"Within a section the movements given to a particular dancer could change in space and time and the order the dancer chose to do them in could come from the instant of doing them. Also the length of each section varied each time. The sections were given names for reasons of identification.

The dance was made up of a series of sections, solos, duets, trios, and larger units, that could freely go from one to the other, so their order was changeable" (Cunningham, in Banes, 1994, p. 105).

As Cunningham's statement indicates, the temporal aspects of *Story* were highly manipulated through chance. The dancers kept track of the changing order of the dance composition by means of looking at lists posted in the wings, giving not only the chronological order of the sections for that particular performance, but also instructions about how long each section should last. In order for the dancers to keep their timing, Cunningham had clocks put in the wings so that the dancers could keep track of time.

The set, costume, and lighting design had an indeterminate relationship to the choreographic structure. Robert Rauschenberg, who designed the set, costume, and lighting, had been instructed by Cunningham to create a new set for each performance, consisting of objects that had to be found in or around the specific theatre building of that very evening's performance, showing strong influences of Dadaism and Marcel Duchamp's notion of readymades. This ever changing set of found objects had a vital influence on the spatial embodiment of the dancers, as they were instructed in some sections to directly interact with the set design. In a particular section that was called "Object", for instance, "the dancers manipulated, moved, and carried an object that Rauschenberg made or found" (ibid.). Since the objects were different for each performance, the way in which the dancers interacted with those objects had to be adjusted accordingly, and the dancers had to keep on adjusting their movements in space and time for each performance.

In addition to the diverse nature of objects that the dancers had to negotiate with on stage, Rauschenberg went a step further and started to experiment with "live decor" (ibid., p. 104). The live decor essentially consisted of Rauschenberg and his assistant, Alex Hay, being on stage and creating the set while the work was in the process of being performed. Rauschenberg and Hay thus participated with their own embodiment in the live performance, creating, as it were, a performance within the performance.

The costume design, like the set design, was created anew for each single performance. Rauschenberg's interpretation of Cunningham's instruction, to have the costume picked up in the area where they happened to be performing that evening, was to let each dancer find the elements of their own costume themselves, for instance from secondhand clothes shops. Sometimes, the dancers' choice of costumes had a significant impact on each other's appearance, as well as on their movements. Carolyn Brown, one of Cunningham's dancers during the 1964 tour, recalls how one of her dance colleagues "Barbara Lloyd [put] on all the costumes she could manage, leaving the rest of us with next to nothing, and making herself so large and encumbered she could barely move" (Brown, in ibid., p. 106).

Accompanying the indeterminacy of the set and costume design, the lighting design was also changed for each performance. Rauschenberg not only made use of the traditional elements of theatre lighting, but also incorporated non-traditional elements such as work lights in his design. Sometimes, those non-traditional lights were put on stage, and thus became part of the set design, directly interacting with the movements of the dancers. Additionally, the very architecture of the theatre was sometimes actively used by Rauschenberg in his designs: in Venice, "the stage had platforms, which Rauschenberg raised and lowered; in Helsinki, part of the stage began to revolve near the end of the dance. In Augusta, Georgia, in a hall with two theatres back to back, the audience saw the empty theater behind the stage as the backdrop. At UCLA, the vista included the open doors, hallway, and scene shop behind the stage" (ibid., p. 107).

The music for *Story* was a composition by Toshi Ichiyanagi and entitled *Sapporo*. Instead of using traditional methods of music notation, the music score used a very limited set of symbols, leaving the musicians free to interpret the symbols in various ways and using different instruments, or methods, of producing the music. John Cage, for instance, at one performance "played a mirror by rubbing it with a cut bottle" (ibid.,

p. 108). One further element of chance in the music was due to the fact that the composer's instruction for the work allows for up to fifteen performers, including the conductor, but there are sixteen different scores. Thus, in order to play all the sixteen scores of the work, the music would have to be played through at least twice during one performance, since at least one score would always remain unused. The audible impact of the missing score(s) was that each repetition of the music would differ from the previous performance of the scores.

Because of the highly indeterminate relationships between movement, choreographic structure, costume, light, music, and set design, each performance of *Story* became something new, and no person could know in advance exactly how any particular performance would unfold. In Cunningham's view, however, this indeterminacy was not limited to affecting the performance only in terms of, for instance, bodies, costumes, materials, and timings. Yet another important aspect of *Story* was audience perception. Cunningham's aim in *Story* was to tell a multiplicity of stories: "The title does not refer to any implicit or explicit narrative but to the fact that every spectator may see and hear the events in his own way" (Cunningham, in ibid., p. 104).

Thus, *Story* (1963) brings into play the idea that the audience members contribute to the work through their sense making, and it highlights Cunningham's attitude that there is no single authoritative reading of his work. Just as any costume, lighting cue, or movement is exchangeable within his work, any reading or the work is also valid and exchangeable. *Story* was told differently every time it was performed and, because it consisted of a collection of individual stories, each one being told new every evening, the spectators were entirely free to make up their own story/stories as they experienced the work.

In addition to *Story*, the 1964 tour also included *Winterbranch* (1964). This work also explored indeterminacy, mainly in the relationship between movements and light. During a performance, Rauschenberg would employ chance methods in switching on and off the stage lighting, so that each instance of *Winterbranch* would expose different fragments and sequences of the movements of the dancers.

Owing to Rauschenberg's manipulation of the light, it was impossible to know in advance which particular movements would be visible during a performance of *Winterbranch*, and how those glimpses of movements would relate to the composer La Monte Young's soundscape. This unpredictability lent a unique potential to read the work anew every time it was performed. In a video documentary on Cunningham by Charles Atlas and Sylvie Blum (2001, video on DVD), Cunningham recalls some interpretations he had been given by various audience members from different countries watching *Winterbranch*:

"We did it in Chicago, and they thought it was a rumble; we did it in Sweden, and they said race riots; we did it in Germany, and they said concentration camps; we did it in Japan, and they said the atomic bomb; the one I like the best was the woman who was on our tour with us... she was the wife of a Sea Captain, she said it looked like a shipwreck" (Cunningham, in ibid., video on DVD, transcribed by Johan Stjernholm).

In contrast to the narrative readings that Cunningham received in relation to *Winterbranch*, he explains that the choreographic basis for the movement material of *Winterbranch* was practical studies on various ways of falling (ibid., video on DVD).

Further examples from Cunningham's oeuvre could be given that would exemplify his aim to experiment with spatial and temporal structures of movement, and indeterminate relationships between embodiment, costume, lighting, music, and set design. In the work *How to Pass, Kick, Fall and Run* (1965), Cunningham and Cage were experimenting with coincidences between sound scores and movements. For the twenty-four minute piece, Cage created fifteen stories, each one about one minute long, filled out with periods of silence. Controlling the timing of the stories with a stopwatch, Cage never told the same story at the same point in time, and thus, the relationships between Cage's recitation and the dance movements would always change from performance to performance.

Further, in *Walkaround Time*, Jasper Johns developed the set design without having seen any of the dance movements, and Cunningham developed the movements without having seen the set design. According to Jasper Johns, "Cunningham saw the set and 1 the dance, 1 think, on the day before the premiere" (Johns, 1975, p. 169). Thus, the final placements of the set, and the way in which the dancers interacted with the set in *Walkaround Time* were based on impromptu decisions made during the very final moments before the premiere, or perhaps even during the performance itself. Another example of chance procedures affecting the relationship between movement and set

design is *RainForest*, a work in which Andy Warhol had put helium-filled, silver-mylar pillows on the stage. As the dancers moved over the stage, they occasionally bumped into the pillows, which were randomly moved around by those chance encounters (Mumma, 1975, p. 274).

In the above mentioned works, Cunningham has consistently avoided giving any clues as to what narrative content, or expressive and emotional meaning the dances might or might not convey. Cunningham (1970, p. 42) does not seem to favour or reject any particular reading, but instead suggests that "Any idea as to mood, story, or expression entertained by the spectator is a product of his mind, of his feelings; and he is free to act with it". In relation to the various narrative interpretations that Cunningham received from audiences watching *Winterbranch*, including race riots, atomic bombs, and a shipwreck, he argues that "Of course, it's about all of those and not about any of them, because I didn't have any of those experiences" (Lesschaeve, 1999, p. 105).

Cunningham does not seek to narrate stories intentionally, nor express symbolic forms or emotional content, but rather engage in questions such as "What are movements? What are time and space? What are the material and the reality of gesture? What am 1?" (Celant, 2000, p. 23). The apparent openness that Cunningham voices towards different interpretations of his work, in combination with his use of chance methods, may give the impression that his work is completely arbitrary and void of any kind of personal preferences. Celant (ibid.) voices such an opinion, which also emphasises Dadaist tendencies, stating that to Cunningham, "it is possible to use any movement whatsoever, any sound, any image, any style" (ibid., p. 24). However, in addition to Celant's reading, there are other complementary views on Cunningham, revealing the possibility of tracing certain structuring principles, and even self-imposed limitations, used by Cunningham in his work.

(c) Alternative viewpoints

According to Celant (ibid.) Cunningham transforms everything into objects, or modules, that are arbitrarily exchangeable, expressed in the statement that Cunningham transforms movements "into *indifferent* objects... without attributing to them any absolute value" (ibid., p. 23) [italics in original]. Not only movements are objectified, but also the subjects performing the movements, so that a Cunningham dancer "could become a *third person*, malleable and transparent, able to be subjected to any technique whatsoever" (ibid., p. 25) [italics in original]. It appears that from Celant's perspective,

Cunningham has managed to suspend his own personal preferences in his choreographic practices. Roger Copeland (1979, p. 160) also emphasises Cunningham's ability to suspend his own personal preferences of how movements aesthetically could or should progress. For Copeland, it is precisely this suspension of subjectivity that distinguishes Cunningham from the abstract expressionism that characterised the improvisational methods used by other early modernist dancers. Cunningham's application of chance practices served to liberate him from intellectual and analytical habits in terms of the ordering and sequencing of movements.

Copeland's and Celant's views on Cunningham's use of chance and arbitrariness correspond to certain statements made by Cunningham himself. In a series of conversations between Cunningham and the author Jacqueline Lesschaeve (1999) between the years 1977 to 1983, Cunningham reveals how Albert Einstein's theory of relativity (Einstein, Lawson, Geroch and Cassidy, 2005), originating in the early twentieth century, had a most profound influence on how he came to relate to space. One of Einstein's concepts that Cunningham was particularly interested in was the axiom that " There are no fixed points in space" (Lesschaeve, 1999, p. 18). Cunningham interpreted Einstein's idea of an absence of any fixed spatial points as "if there are no fixed points [in space], then every point *is* equally interesting and equally changing" (ibid.). One of Cunningham's works is indeed entitled *Points in Space* (1986), in which video technology is used in relation to the arrivals and departures of his dancers as a means to explore various relative viewpoints. Thus, one way of reading Cunningham's work is to see it as having no inherent spatial meaning in the movements.

However, Celant's and Copeland's reading of Cunningham's arbitrariness, indifference, and suspension of subjectivity is not universally endorsed. For instance, the scholars and dance critics Noel Carroll and Sally Banes (1983) sees in Cunningham's dancers certain embodied stylistic features. The presence of such recognisable embodied patterns makes it possible for Carroll and Banes to contrast Cunningham's work to the choreographic style of Martha Graham, or to Rudolf Laban's legacy of movement qualities:

"In opposition to the technique of the Graham style (from which he emerged), Cunningham's movement is light. It is directionally flexible and often rapier fast, covering space both quickly and hyperarticulately. At the same time, it is characterized by what followers of Laban call bound flow; the energy is liquid and resilient inside the dancer, but it stops at the boundary of the body. It is strictly defined and controlled" (ibid., p. 179).

If Cunningham had an absolute and complete indifference towards movement, and if chance was allowed to fully determine any movement in relation to another, how could Banes possibly identify a particular and consistent movement style or quality in Cunningham's work? The answer seems to point towards a use of certain signature movements, or a distinguishable technique that has particular recognisable feature. According to David Vaughan (1989, p. 98), performer, choreographer, scholar, and Cunningham Company archivist, Cunningham's choreographic work is characterised by "the leg action and the pelvic turn-out of ballet with the flexibility of the torso of the modern dance".

Because of his use of chance, the movement directions of a Cunningham dancer would typically not proceed, as it were, organically, in time and space. Any movement, any limb, any angle and direction of that limb, according to Celant (2000), Copeland (2004), and Cunningham himself (Lesschaeve, 1999), is exchangeable and replaceable. However, since Banes (1994, p. 103) also has identified in Cunningham's work "a predetermined gamut of movements, body parts, or stage spaces", it seems that yet another reading of Cunningham is that chance procedures are applied only within certain limits, or thresholds, which contain Cunningham's application of chance.

One threshold in Cunningham's willingness to let indeterminacy run its own course seems to have been reached in his work *Story* (1963). Not only Cunningham, but also his dancers, as well as Cage and Rauschenberg felt uncomfortable about the way in which the indeterminacy of *Story* developed. Banes (ibid.) cites Carolyn Brown, one of Cunningham's dancers during the 1964 world tour, saying that "Cunningham 'hated [*Story*], because he couldn't control it" (Brown, in ibid., p. 108), and Cage, Brown reveals "didn't trust us to do indeterminate dancing" (Brown, in ibid.). Rauschenberg recalls in an interview how he "hated those stands" of the set design that he had to make new every single time *Story* was to be performed (Rauschenberg, in Atlas et al., 2001, video on DVD, transcribed by Johan Stjernholm).

Banes (1994, p. 108) concludes in her analysis of *Story* that the subsequent discontinuation of the work "seems to indicate Cunningham's unwillingness to go

beyond certain boundaries in choreography and in dance performance". The unwillingness that Banes refers to can be traced to the fact that Cunningham would not fully engage in some improvisation practices that were explored by his younger colleagues and contemporaries who were working in the experimental Judson Dance Theatre group from the 1960s and onwards (ibid., p. 207). An example of which can be found in the exploration of mundane and ordinary movements made by the choreographer and dancer Yvonne Rainer (1983; 1999) in her work *Trio A* (1966).

(d) Indeterminate limits

Cunningham's work *Story* (1963) could be seen as one instance of a materialisation of the limits beyond which he was not willing to go. After *Story*, Cunningham never developed a work in which indeterminacy and chance were allowed to reach such a level again. Instead of continuing from *Story* towards ever increasing levels of relative indeterminacy, Jordan suggests that *Story* "was dropped quite quickly form the repertory, and he [Cunningham] has used indeterminacy less and less since" (1979, p. 17). Thus, according to Banes, *Story* became not a typical representation of Cunningham's work, but "a departure from Cunningham's usual methodology" (Banes, 1994, p. 104). Indeed, Cunningham himself did not identify his work mainly in terms of chance methods, but he said: "My use of chance methods... is not a position which I wish to establish and die defending. It is a present mode of freeing my imagination from its own cliches and it is a marvellous adventure in attention" (Cunningham, in Jordan, 1979, p. 17).

But what did Cunningham's "usual" methodology look like, and what were the boundaries within which he operated? It would be very difficult to try to pinpoint any consistent particular approach or method used by Cunningham, as he continued to innovate and change his methods of practice for over half a century, until his death in mid 2009. For instance, with the advance of computer technology, he embraced the use of computer software such as *Lifeforms* in relation to his choreographic activities (Atlas et al., 2001, video on DVD), but in the very early days of Cunningham's career, during the 1940s through the 1960s, 3D computer animation of humanoid figures was simply not a practical option.

However, even with the advance of computer technology, Cunningham seems to have kept within certain self-imposed frameworks. One such framework that may serve to define his "usual" methodology can be traced in a commentary by Cunningham regarding his engagement in computer-based practices. In a discussion relating to the unlimited movement possibilities of computer animated avatars in the software *Lifeforms*, Cunningham pointed out the fact that in *Lifeforms*, it was possible for him to turn the head of an image of an avatar around two or three times, but, as he continued to explain: "that does not interest me, because humans can't do that, and I much prefer to work with the human body, within its limits" (Cunningham, in ibid., video on DVD, transcribed by Johan Stjernholm). The interest that Cunningham proclaimed in the anatomical limitations of embodied human movement may be seen in his application of computer animated projections in *BIPED* (1999), where he used the technology of motion capture as a means to allow human movement to exercise control and set boundaries for computer simulated avatars.

Even the consistency of Cunningham's (1970, p. 42) idea that "Any idea as to mood, story, or expression entertained by the spectator is a product of his mind", could be called into question. For instance, Jordan's (1979) analysis of Cunningham's collaborations with musicians and composers in "Freedom from the Music: Cunningham, Cage & Collaborations" provides two examples where expressive dramatic content may be identified in Cunningham's work.

During the 1950s, Cunningham made three solos to piano music by Christian Wolff. In his own words, the three solos contained an "unmistakable dramatic intensity" (Cunningham, in ibid., p. 17). Accordingly, the American Composer Earle Brown commented that all the pieces that Cunningham made for Wolff's music were "very strange, seemingly psychologically oriented" (Brown, in ibid.). Brown's impression of a psychologically oriented content in Cunningham's work may of course be explained as yet another instance of a reading that is entirely produced by the mind of the perceiver. However, in this case, Brown's impression coincides with Cunningham's acknowledgement that the presence of dramatic intensity in this work was "unmistakable" (Cunningham, in ibid.).

Jordan identifies yet another example of Cunningham's potential for expressive content in his 1970 work *Second Hand*. In this case, the performing rights were withheld for Cage's original arrangement of the chosen score, which was Satie's *Socrate*. As a result, Cage instead composed *Cheap Imitation*, which followed the phraseology of *Socrate* in its first three versions (ibid.). Jordan points out two different accounts suggesting that Cunningham's movements in *Second Hand* could be seen as having an expressive relationship to the character of Socrates in Satie's score.

According to Jordan (ibid., p. 17), the critic Michael Snell considered that there is "an explicit connection between the personae of Socrates and Cunningham and between each section of the dance and the text of *Socrate*". While Snell's account on its own may be disregarded as a purely subjective reading, there are two circumstantial facts that add weight to this impression. First, Cunningham himself acknowledges that Cage's music follows Satie's music very closely, "Same phraseology, same rhythm, but the melody is entirely new; and he made it for one piano so that he could play it" (Cunningham, in Lesschaeve, 1999, p. 88). The second piece of circumstantial evidence may be found in Cunningham's response to Lesschaeve's question on how space, rhythm, and movement were related to each other in the creation of *Second Hand*:

"In this work the music was the first consideration, its structure and even its content. I worked out timings for myself, studying the phrasing and the rhythm of the music, and then worked on spatial ideas which led to the movement ideas" (Cunningham, in ibid., p. 89).

Thus, Cunningham's own words lend support to the idea that Satie's phraseology in *Socrate* served as a primary input for Cunningham's development of movement material in *Second Hand*. Carolyn Brown, who performed in *Second Hand*, also held this view about the work. According to Brown, Cunningham assumed an anguished expression at the particular point in Satie's original score where Socrates is preparing to meet his death (Jordan, 1979, p. 17). This anguished expression was most certainly not a singular, chance based coincidence, since Brown maintains that the correspondence between music phraseology and Cunningham's expression of anguish happened repeatedly, both during the dress rehearsals, as well as during the public performances of *Second Hand* (ibid.).

However, Cunningham still maintained that he was predominantly interested in embodied spatial relationships. For instance, he described the first part of *Second Hand* as "a solo in which I stood in one place and did the dancing without moving away from it for about five or six minutes" (Cunningham, in Lesschaeve, 1999, p. 88). In this description, there is an emphasis on notions of embodied place, space, and time, not his relationship to Socrates. Regarding the particular point in the score where Socrates was preparing to meet his death, he explains that:

"In the final movement, 'Mort de Socrate', in an attempt to keep the space from being static, I decided to choreograph it in such a way that the dancers would have made a complete circle by the end of the piece. I began the movement standing alone at the back of the stage, and the dancers gradually entered and throughout the dance we make this spiraling circle before the final exit of the dancers leaving me on the stage alone. The circle is in no sense explicit. Dancers break off and move in different directions as the dance continues, but the diffused circular pattern is present.

The rhythm and phrasing were taken from the music" (Cunningham, in ibid., p. 89).

In spite of the fact that Cunningham even identifies the last movement of *Second Hand* as "Mort de Socrate", the death of Socrates, he consistently refers to spatial and temporal concepts in his description of the choreography. Almost as an afterthought, he mentions the importance played by the music in his work, and even then, there is no explication of how the expressive content of the music may have a relationship to his movements. In Jordan's conclusion regarding the complete absence of any comment whatsoever from Cunningham in relation to the expressive relationship between music and movement in *Second Hand*, she seems at a loss to find an explanation for this silence, and simply states that "Presumably Cunningham had his reasons for withholding the original programme from the audience" (Jordan, 1979, p. 17).

To summarise, it seems possible to read Cunningham's work in different ways, a conclusion that he perhaps would have intended, or at least not opposed. Cunningham may from one perspective appear as a radical avant-garde artist, experimenting with chance based fragmentation of embodied space/time, costume, music, and set design. From this perspective, all the elements of Cunningham's work could be read as having arbitrary relationships and as being exchangeable. Another interpretation is to see an unwillingness on Cunningham's part to let go of a certain level of control in terms of spatial and temporal aspects of embodiment. Instead, all Cunningham's work repeats variations on certain embodied movement patterns, described as the Cunningham technique. Moreover, Cunningham also appears to use improvisation with caution, not engaging in improvisational practices to the same level as other American dancers, such as Yvonne Rainer (1999). Yet another perspective on Cunningham, exemplified

above by Jordan's analysis (Jordan, 1979), is to see in his work a subtle layering of narrative, psychological, and expressive content.

During Lesschaeve's (1999) series of interviews, Cunningham positions himself somewhat ambiguously between the above presented opinions and interpretations of his work, neither refuting nor supporting any claim for expression, or the absence thereof. Instead, he suggests that all the various interpretations could be referred to as "those moments which are not intended to express something, but are nevertheless expressive" (Cunningham, in ibid., p. 107). Similar to Cohen's (1981) versatile and flexible analysis of the Dance of the Sugar Plum Fairy, Cunningham's work may usefully be approached from multiple perspectives. Neither Langer's symbolic forms, nor a literal reading of Goodman's dualistic model of denotation/exemplification, managed to successfully cover the scope of Cohen's reading of the Sugar Plum Fairy's dance as an expression of a gentle and friendly personality (ibid.). Cunningham's work would in a similar manner defy any system of classification or reading that aimed to impose strictly defined and demarcated categories.

It appears that Cunningham's choreographic practices has proven Langer's (1953) notion of the virtual too rigid and exclusive. Not only does his work resist any effort to be put into one single category of dance, but it altogether challenges Langer's notion of dance as symbolic form, as well as Sach's (1937) idea of dance as an expression of a vital, original, and ecstatic inner life. In the beginning of this chapter, however, I was referring to yet another vitalist theory developed by John Martin (1933a). His work presents a very different vitalist stance from Langer's and Sachs', and has been utilised as one of the sources for Reynolds's (2007) development of a kind of virtuality that applies to dance in a very different way than Langer's virtual power (1953).

IV. A vitalist machinery

Martin's (1933a) basic assumption about dance is in some respects similar to that of Sachs (1937); he argues that "Movement is the most elementary physical experience of human life" (Martin, 1933a, p. 7), and "Physical movement is the normal first effect of mental or emotional experience" (ibid., p. 8). Hence, Martin continues, "If we go back to the earliest times, we find that primitive men danced when they were deeply moved" (ibid.). However, in contrast to Sachs, Martin does not engage in a discussion where dance is projected as an activity that liberates primeval forces that have been restricted and repressed by culture. The tendencies of the German idealist vitalism of the early

twentieth century (2007), where modernity and industrialisation were seen as infringing on the idea of a true human identity, life, and the body, similarly have very little in common with Martin's approach to dance. To the contrary, Martin (1933a) argues that an excessive fear of the concept of the machine and mechanised production is counterproductive in relation to dance practice:

"The romanticists objected to machine-made movement, so they decided to make their movements without any machine, without any mechanism. Of course it could not be done. In repudiating muscularity, they turned to a sort of mystical hokus-pokus and relied on that to produce their results" (ibid., p. 28)

It appears from this quote that to some extent Martin sees the muscularity of the human body as a machine, or a mechanism. This viewpoint is not new, as it echoes thoughts from the eighteenth-century French physician Julien Offroy de La Mettrie and the seventeenth-century English philosopher Thomas Hobbes: "'Man is a machine and... in the whole universe there is but a single substance variously modified,' concludes LaMettrie. 'For what is the heart,' wrote Hobbes a century earlier, 'but a spring; and the nerves, but so many strings; and the joints, but so many wheeles.'" (Mitcham, 2003, p. 498). However, while these ideas, quoted by the scholar and philosopher of technology Carl Mitcham (ibid.), are by no means radical, they do demonstrate Martin's different form of vitalism from that of Langer and Sachs. Martin (1933a) develops further his view on bodily movement as a something that is manufactured in his comparison between classical, romantic, and modern dance:

"Where the classic decadence was a machine that manufactured nothing, and the romantic revolution was an attempt to manufacture something without a machine - to express something outside and above oneself, the modern dance has arisen to manufacture something with a highly perfected machine - to express only what is in and of one's own experience, transformed and lifted out of the commonplace and the personal by the very process of artistic creation, of aesthetic form" (ibid., p. 30).

In Martin's view of dance, there is a combination of the concept of dance as originating in an elementary physicality of the human body, and the notion of dance movements as a manufactured product. Together, those two ideas serve to provide a basis for Martin's development of kinaesthesia as having a most crucial role in dance practice and perception. On its most basic level, kinaesthetic sensation is what gives meaning and expression to movements, as the perceiver's "muscular memory" (ibid., p. 12) acts in sympathy with the moving performer: "Through kinesthetic sympathy you respond to the impulse of the dancer which has expressed itself by means of a series of movements" (ibid.).

The kinaesthetic sympathy establishes an internal rhythm between performer and perceiver, which largely relates to the muscular memory of the perceiver in relation to the movements that are perceived. However, Martin also identifies another, "external rhythm which does not exist within the frame of the composition, and this is the rhythm that produces the aesthetic reaction in its fullest development" (ibid., p. 78). The presence of such an external rhythm, according to Martin, is what distinguishes popular art from "genuine art" (ibid., p. 81), and its purpose is to lift the viewer of the dance to "a permanently higher level of perception" (ibid.). Hence, the combination of external and internal rhythms suggests that a perceiver is affected both on a physical and a mental level, as it alters his or her perceptual experience.

(a) Metakinesis revisited

Martin's idea that the movement of a performer "is transferred in effect by kinesthetic sympathy to the muscles of the spectator" (ibid.) has recently been adopted and modified by Reynolds (2007) in her work *Rhythmic Subjects: Uses of Energy in the Dances of Mary Wigman, Martha Graham and Merce Cunningham.* Instead of using Martin's terminology, Reynolds identifies a certain "kinesthetic imagination" (ibid., p. 1) in the development both of European and American modern dance in the twentieth century, marked by strong vitalist characteristics:

"Modern dance was rooted in practices of transforming the 'self' through kinesthetic imagination, and resisted historically specific economies of energy that assimilated human to mechanical rhythms" (ibid., p. 15).

In addition to kinaesthetic imagination, Reynolds identifies yet another process in the development of modern dance, related to audience perception, in the form of "kinesthetic empathy" (ibid., p. 14). The two kinaesthetic concepts are strongly related, but they do have some important differences. For instance, whereas the kinaesthetic imagination is identified as a driving force behind the development of modernist dance

practices, the kinaesthetic empathy mainly concerns audience perception of dance. Another difference lies in Reynolds's use of the notion of the virtual.

Reynolds's virtuality is intimately linked to a particular reading of Merleau-Ponty's (1962, p. 110) concept of "motor intentionality" (Reynolds, 2007, p. 187), described as a certain goal directed action in which the goal of the movement is not fully transparent to the mover. The obscurity of the goal produces, in Reynolds's reading of Merleau-Ponty, a sense of openness, or future potential towards movement, while always remaining grounded in an embodied experience of the present. According to Reynolds (ibid.), Merleau-Ponty "saw potential movement as a never-ending process".

The intentional aspect of Reynolds's virtuality is also rooted in Martin's (Martin, 1933a, p. 13) references to the ancient philosophical notion of "Metakinesis", a term that addresses "the relation that exists between physical movement and mental - or psychical, if you will - intention" (ibid., p. 14). To Martin, human movement is always a kinetic expression of an intention, and Reynolds's kinaesthetic imagination could be seen as a combination of her reading of Merleau-Ponty's motor intentionality and Martin's application of metakinesis: Movement as an open-ended process, yet an expression of an already internally experienced kinaesthetic sensation in the form of a virtual blueprint that establishes the potential, or possibilities, of how the act may be manifested.

Kinaesthetic empathy, on the other hand, does not necessarily involve any bodily relocation or movement, but is enacted purely as a virtuality, in Reynolds's sense of the word: kinaesthetic sensations triggered in the viewer as a response to a perceived movement. However, just like the kinaesthetic imagination, this an open-ended process which extends far beyond the concept of a plain mirroring of neurological activity, predetermined by the characteristics of the movement. Instead, Reynolds (2007, p. 14) explains, "virtual participation in the movement of another can also have a de-centring effect, accentuating the 'otherness' of self and the tension between exteriority and interiority". Additionally, in the spectator's mind, there is a certain relationship between Martin's (1933a, p. 78) concept of internal and external rhythms, where the "Internal form deals with his utilisation of the known, and external rhythm deals with his invocation of the unknown". It is only by means of this invocation of the unknown that "the aesthetic reaction in its fullest development" (ibid.) is achieved, as it "sets up,

along with the familiar patterns, such departures from them as to give them a new cast, a new meaning" (Martin, in Reynolds, 2007, p. 14).

Reynolds's virtuality appears to be of a very different kind to Langer's (1953). Instead of prescribing the virtual as an irreducible essence of a particular and distinct art form, Reynolds outlines a more flexible framework of the virtual, which is intimately linked to the construction, modulation, and perception of a subjective self. However, in spite of their differences, both Langer and Reynolds refer to phenomenological theory in order to verify and explain their respective virtualities. As noted above, Reynolds largely turns to Merleau-Ponty (1962; 1968), while Langer, on the other hand, partly derives her thought from Ernst Cassirer's (1953) *The Philosophy of Symbolic Forms*.

(b) The phenomenological connection

A brief examination on how Langer (1953) and Reynolds (2007) interpret and apply their phenomenological sources will demonstrate that a re-reading of Cassirer (1953) and Merleau-Ponty (1962) might assist in understanding the notion of the virtual. Langer (1953) demonstrates her strong links to Cassirer in her argument that art must be understood as symbolic form, and that the material reality of each art form only achieves its essential meaning by means of representational practices which produce a primary illusion. However, in her strict emphasis on the univocal boundaries between each art form, as well as between their corresponding virtualities, she also establishes a distinct demarcation between that which is imagined and that which is, as it were, real. The borders between the illusory and the real are maintained by scientific methods of quantification: "forces that cannot be scientifically established and measured must be regarded, from the philosophical standpoint, as illusory" (ibid., p. 188).

Cassirer (1953), in contrast to Langer, stresses the limits of scientific knowledge, and argues that there are certain formative factors which govern both the scientific world view as well as the world of the illusive and imaginary. Science, perception, intuition, and myth are all united in his concept of "knowledge" (ibid., p. xiii), and nothing is strictly separate and isolated from other things. Instead, everything has a certain fluidity, merging into everything else without any distinct boundaries between myth, perception, objects, and science: "Everything is connected with everything else by invisible threads" (ibid., p. 72). In order to address the fluid characteristics of perception and knowledge, Cassirer refers to the mathematical concepts of "manifolds"

and "multiplicities" (ibid., p. 13), and in the next chapter I will return to discuss those terms in more depth.

Turning to Reynolds's (2007) application of Merleau-Ponty's (1962) concept of intentionality, she situates the virtual as something which provides a potential for bodily movement in an immediate future. There is always a chance, however, that the movement may not materialise, and thus, the virtual outlines the possibility of movement. The strong link that Reynolds aims to establish between the virtual and the possible may be highlighted by the fact that she, as a French scholar, provides an alternative to Colin Smith's translation of *Phenomenology of Perception* (ibid.).

Reynolds's alternative translation corresponds to a section where Merleau-Ponty analyses the symptoms of the patient, Mr. Schneider, who is suffering from "psychic blindness" (ibid., p. 103). Schneider is unable to locate any specific part of his own body when asked to do so. For instance, when asked to touch his head with his hand, Schneider is unable to coordinate such a movement. However, he is able to immediately respond to certain physical stimuli, such as being stung by a mosquito, upon which his hand immediately finds the place of discomfort. The particular section that Reynolds has translated contains a comparison of how touching Schneider's body generates a different embodied response from touching the body of a "normal person" (ibid., p. 109). According to Smith's translation of Merleau-Ponty, the passage reads:

"each stimulus applied to the body of the normal person arouses a kind of 'potential movement' rather than an actual one; the part of the body in question sheds its anonymity, is revealed, by the presence of a particular tension, as a certain power of action within the framework of the anatomical apparatus" (ibid., pp. 108-109).

In Reynolds's modified translation of the same passage, the words "power of action" (ibid.) are replaced by "*potential for action*" (2007, p. 187) [italics in original]. While Reynolds's choice of words in no way detracts from Merleau-Ponty's discussion,¹ it

^{1.} In my quote from Smith's translation of Merleau-Ponty (1962, pp. 108-109), I have included the mention of "potential movement" in order to illustrate the coherence in Reynolds's translation. Further down the same page Merleau-Ponty refers to the capacity of a normal subject to insert its own body "in the realm of the potential" (ibid., p. 109), and a few sentences later, Merleau-Ponty defines the body of a normal subject "as the centre of potential action" (ibid.).

does highlight the fact that a close connection is established between the virtual and the potential, as a possibility for bodily action in an immediate future. More specifically, Reynolds proposes the idea that prior to a virtual action having become actualised as a bodily displacement, the movement would already have been established in the virtual as a possibility for action. This indeed appears as one valid way of reading Merleau-Ponty, who also states that "The normal person *reckons with* the possible, which thus, without shifting from its position as a possibility, acquires a sort of actuality" (ibid.).

(c) Virtual beyond the possible

While a definition of the virtual as a potential, or a future possibility, for movement, serves well to support Reynolds's stated goal - which is "to show that uses of energy in movement, and their transformation, are central to dance practice and analysis", and that "This transformation comes about through kinesthetic imagination" (2007, p. 1) - this definition does pose two problems in the context of my research objective to perform an analysis of the virtual, particularly in relation to Deleuze (1994), but also to Cassirer (1953).

For instance, from Cassirer's (ibid.) perspective, the phenomenological ground for any perception of embodiment or movement, virtual or not, as well as the foundation for any analytical discourse, stems from the synthetic character of the manifolds, where the concepts of the mediated and the direct are fluidly merged together as a composite. Hence, a comprehensive understanding of the experience of kinaesthetic empathy, in the form of directly transferred and vital bodily sensations, must be preceded, or at least accompanied, by an analysis of what is mediated through symbolic representation, which is intrinsic to any act of direct perception. Based on such an analysis, the direct sensation may be stratified as a distinct abstraction, separate from that which is signified.

Deleuze (1994) poses an even more direct challenge to Reynolds's virtuality. In this case, the issue is focussed on the close connection that Reynolds establishes between the virtual and the possible, as a potential for movement. The possible, Deleuze suggests, does not precede the actual, in the form of a virtuality, but the possible is in fact opposed to the virtual. While defining his concept of virtual "Ideas" (ibid., p. 168), he argues that "The only danger in all this is that the virtual could be confused with the possible" (ibid., p. 211). Further, on the same subject, he suggests that "Any hesitation between the virtual and the possible, the order of the Idea and the order of the concept,

is disastrous" (ibid., p. 212). Deleuze, co-authoring with Guattari (1988), also proposes the notion of a rhizomatic understanding of the world, which in some respects has parallels to Cassirer's manifolds and multiplicities. The rhizomatic network is characterised by an absence of both periphery and centre, but everything is indirectly, non-hierarchically, and interdependently linked together.

V. Conclusion

In this chapter, I have demonstrated how both Langer's and Reynolds's virtualities, which have been developed within specific frameworks and for particular analytical purposes, pose crucial limitations in the context of my investigation. However, I have also discussed how a re-reading of the phenomenological foundations of those virtualities may serve as a source for a redefinition of the virtual, particularly in the way that Cassirer and Deleuze relate to the concept of the manifold. The critique of the virtual has mainly been contextualised by examples drawn from Cunningham's choreographic tradition, which historically has demonstrated how an openness towards the production of meaning. This ambiguous stance is an important feature which makes Cunningham's practices a suitable object for my study on perception.

However, the specific details of how a re-reading of Cassirer and Merleau-Ponty may materialise, in the context of perception of dance movements, remains obscure; as well as how such a theory can be put in a context of performative constitution of subjectivity, and Deleuze's development of Bergson's virtuality. In the following chapter, I will address those issues, starting by focussing on the relationship between phenomenology, performativity, and a descriptive, textual representation of dance.

Chapter 3: Performative phenomenology

I. Introduction

While the previous chapter discussed the perception of modern dance in rather general terms, mainly discussing the vitalist tradition and the historical role of Cunningham's practices, this chapter will look at movement in more detail. More specifically, this chapter is an in-depth study of how it may be argued that particular movements of specific body parts both phenomenologically and performatively participate in the constitution of subjective perception. The reason this subject matter is important to my discussion, is founded on the idea, proposed through Cunningham's practices as well as by critical accounts on Cunningham (Foster, 1988; Copeland, 2004), that certain kinds of dance involve "working with movement *qua* movement; in fact, that is their whole focus" (Sheets-Johnstone, 1979, p. xiii) [italics in original]. However, this chapter does not aim to suggest how a movement for its own sake may be perceived or interpreted, but rather, how such a movement is perceptually embedded in a performatively and phenomenologically constituted subject. Hence, I will outline here a foundation for a model which explains the operational structures which make it possible to perceive embodied movement *qua* movement.

However, as the primary focal points in this chapter are performativity, phenomenology, and their interrelatedness, I will suspend my discussion of Cunningham's practices for the time being. Instead, my study of movement will be centred on a textual description of the work of a female choreographer by Susan Foster (1998), who develops the notion of non-verbal performativity as a critique of Jacques Derrida's (1982) and Judith Butler's (1990) applications of the performative. My reading of Foster's descriptive account serves two purposes: first, it gives a unique and direct insight in how performativity is integral to embodied choreographic practices related to the American modern dance tradition; and secondly, Foster's use of text as a representational practice, as opposed to the act of attending a live performance or looking at a video representation, diversifies the conceptual basis of both my subject of inquiry and its field of application beyond the scope of subsequent chapters.

The structure of the chapter starts with a re-reading of Cassirer (1953) and Merleau-Ponty (1962), as far as their theories has provided a framework for Langer's (1953) and Reynolds's (2007) notions of the virtual. I will then move on to discuss how Foster's (1998) non-verbal performativity may be linked to my specific application of phenomenological thought. Towards the end of the chapter, I will start to draw some tentative links between my model of phenomenologically induced performativity, or perhaps, performative phenomenology, and Deleuze's (1994) concept of the virtual.

II. The symbol in focus

The most crucial contribution of Cassirer (1953), to this thesis, lies in his proposal that reality cannot be approached directly, but has to be understood through symbols and systems of representation. Thus, Cassirer suggests that instead of trying to turn directly towards reality, we "must set up a system of signs and learn to make use of these signs as representatives of objects" (ibid., p. 45). The reason for the difficulty in grasping reality as a direct act of perception is explained by means of the concepts of manifolds and multiplicities. The mathematical understanding of the manifold was originally and progressively developed by the nineteenth-century mathematicians Friedrich Gauss and Bernhard Riemann, and it signifies an entity that is intrinsically defined by its own laws and/or coordinates and does not need to be extrinsically embedded in a higher-level dimension (Delanda, 2004; Kline, 1972).

While Cassirer's philosophy makes frequent references to the mathematical and natural sciences, his work *Philosophy of Symbolic Forms* does not apply the concept of the manifold or the multiplicity in a strict mathematical sense. Instead, he argues that reality consists of a manifold which presents itself to human perception as a multiplicity: "we now have a manifold which lies before us purely as such, an existing multiplicity" (1953, p. 406). In the idea of the manifold, Cassirer addresses what he identifies as one major conceptual flaw in metaphysical thought relating to ideas of reality and truth: the tendency to regard truth as having a unitary or singular character. "The metaphysics of all times has faced this fundamental problem. It postulated a unitary and single being, because and insofar as truth could be thought of only as unitary and simple" (ibid., p. 1). Instead, he proposes that the reality of perception should be regarded as having an intrinsically synthetic character, meaning that perception is always composed of multiple fundamental and original forms of synthesis, such as "number, time, and space" (ibid., p. 13).

(a) Manifolds and multiplicities

To Cassirer, perception simultaneously contains both a pre-scientific stratum and something that is thoroughly mediated and conditioned. This composite is the manifold of perception, which, "at least in its immediate presentation - is not 'constructible': we must accept it as simply given" (ibid., p. 406). Moreover, the synthetic unity of the manifold must always be kept in mind, even during the analytical process of extruding abstract entities from the original manifold. Otherwise, there is risk that the analysis fails to apprehend the most fundamental aspect of being: "the *telos* of the human spirit, cannot be apprehended and expressed if it is taken as something existing in itself, as something detached and separate from its beginning and middle" (ibid., p. xv) [italics in original]. The purpose of analysis, on the other hand, is to transform the manifold that is given to perception as a non-constructible multiplicity into a constructive multiplicity, which it is possible to probe with reason:

"The starting point is a merely empirical, given manifold: but the aim of theoretical concept formation is to transform such a manifold into a rationally surveyable, 'constructive' multiplicity. This transformation is never concluded - is is always begun anew, with increasingly complex means" (ibid., p. 413).

Cassirer's analytical process may be described as continuously moving between two different multiplicities, the constructive and the non-constructible, which together constitute the two complementary sides of the manifold. In the non-constructible multiplicity, everything is composite and fluidly merged together, and in the constructive multiplicity, reason and logic applies in the form of systems of signs and representations. Corresponding to those two sides, or appearances, of the manifold, Cassirer also identifies two kinds of reality. In one, the world exists as a totality of possible expressive experiences, while the other is focused on the concept of the thing and of causality (ibid., p. 85). However, the two realities are not strictly separated, but they are united through the concept of the symbol:

"The analysis of reality leads back to the analysis of ideas, the analysis of ideas to that of signs. Thus at one stroke the concept of the symbol has become the actual focus of the intellectual world" (ibid., p. 46).

The comprehensive role that Cassirer ascribes to the concept of the symbol clarifies the reason behind his stated main aim, which is to understand and analyse "the structure of

the theoretical world" (ibid., p. 77). Symbols, or systems of signs, which are acknowledged as intellectual and theoretical constructs, are nevertheless seen as providing the key to an understanding of reality and perception. Thus, Cassirer can be seen to offer an alternative phenomenological approach towards an understanding of the world, which is different from Husserl's phenomenological reduction.² According to Cassirer, it is vain to try to conceive things in themselves, as some kind of reality or essence that may be approached directly.

(b) Always a beginner

Based on Cassirer's notion of the two complementary multiplicities, it is possible to throw some additional light on my discussion in Chapter Two, where I quoted Cohen's (1981) critique of Langer (1953). In Cohen's analysis, Langer's definition of dance proved too rigid and inflexible to satisfactorily explain the Dance of the Sugar Plum

While Husserl spends considerable effort on the development of his phenomenological reduction, his lectures in Göttingen give, as a context to my discussion, an adequate introduction to the method, which in brief could be described as an attempt to isolate a pure or reduced object. The reduction moves in three stages. The first stage consists of an abandonment of common sense, logic, and scientific attitudes, all of which Husserl (1994, p. 15) classifies as "natural thinking" [italics in original]. The second stage is that of making the perception eidetic, to understand it as something absolute, a transcendent universal: "this perception is, and remains as long as it lasts, something absolute, something here and now, something that in itself is what it is, something by which I can measure as by an ultimate standard what being and being given can mean and here must mean" (ibid., p. 24). The third stage is that of bracketing out the perceived phenomenon from its synthetic constitution as an object of cognition. At this stage, the reduction involves an extensive questioning, not only of the entire mental life of the ego, but also of our concepts of "time and the world" (ibid., p. 34). Only by means of this comprehensive doubt is it possible to bracket out, or suspend, "Every postulation of a 'non-immanent actuality,' of anything which is not contained in the phenomenon, even if intended by the phenomenon" (ibid., p. 35). The result, in Husserl's view, is a reduced and pure phenomenon-object.

^{2.} The concept of a phenomenological reduction was first introduced by Husserl in 1907, as part of a series of lectures delivered in Göttingen, Germany (Husserl and Nakhnikian, 1994). Husserl had arrived in Göttingen in 1901, and until his appointment as professor in Freiburg in 1916, he made some significant changes to the content and methodology of his philosophy, criticising his earlier reliance on psychologism and descriptive psychology. Instead, his phenomenology turns transcendental and eidetic, abstracting that which is perceived from its pre-reflective and contextual embedding. This development of Husserl's eidetic theory could be summarised in the words of Merleau-Ponty (1962, p. xiv): "we cannot subject our perception of the world to philosophical scrutiny without ceasing to be identified with that act of positing the world, with that interest in it which delimits us, without drawing back from our commitment which is itself thus made to appear as a spectacle, without passing from the *fact* of our existence to its *nature*, from the Dasein to the Wesen".

Fairy. According to Sheets-Johnstone (1979, p. xiii), the strict demarcations that Langer set up between the various art forms and their virtual essences also failed to account for dance practices more or less entirely focussed on "working with movement *qua* movement" [italics in original]. The reason for those deficiencies in Langer's theory may be traced to her failure to fold the transformed, constructive multiplicity back to the given, non-constructible multiplicity. In Langer's case (1953), she transforms the manifold into the symbols and signs of the constructive multiplicity, where she firmly and consistently remains. Whereas Langer argues that "the space in which we live and act is not what is treated in art at all" (ibid., p. 72), Cassirer suggests life and form as indivisible, and artistic activity merging with pure artistic vision:

"Life cannot apprehend itself by remaining absolutely within itself. It must give itself form; for it is precisely by this 'otherness' of form that it gains its 'visibility,' if not its reality. To detach the world of life absolutely from form and oppose the two means nothing other than to separate its 'reality' from its visibility - but is not this separation itself one of those artificial abstractions which Bergson's metaphysics attacked form the very first?... But artistic activity, above all, shows how impossible it is to draw a line between inner vision and outward formation; it shows that here vision is already formation, just as formation remains pure vision" (Cassirer, 1953, p. 39).

In addition to Cassirer's central concept of the importance of the symbol, my above reading of Cassirer has highlighted two additional concepts that I will keep and develop further: First, the idea that reality is a synthetic manifold which appears to perception as a non-constructible multiplicity, at once immediate, yet mediated; and secondly, the principle of always allowing the transformation towards a constructive multiplicity, governed by reason, to fold back and begin anew in the synthetic manifold: perception must always appear as a beginner.

Below, I will turn my attention to Merleau-Ponty's (1962) phenomenology, which to a large extent serves to define the intentional characteristics of Reynolds's (2007) virtuality. I will examine in particular the context of the passage which Reynolds used in order to derive her notion of the virtual as a potential for movement, where Merleau-Ponty is discussing the case of Mr. Schneider and the notion of a "body image" (Merleau-Ponty, 1962, p. 141).

III. Developing a body image

The "phenomenal field" is a fundamental concept in Merleau-Ponty (ibid., p. 54). The field could be described as a state, or process, of perception that takes place prior to the subject/object division which grounds analytical knowledge and perception as an embodied subject with discrete senses. From Merleau-Ponty's perspective, the identification of a body part, such as an arm, is by no means a direct perception within the phenomenal field, but instead, the result of a process of embodied objectification, involving several layers of abstraction. The process of abstraction starts as the phenomenal field becomes vaguely stratified into a centre and a surrounding horizon, establishing, as it were, a proto-subject, which marks the beginning of the development of a subjective viewpoint and a distinction between a self and a world. Somewhere on the horizon, the proto-subject focuses its attention at a certain point, a phenomenon. The phenomenal point forms the basis for the generation of a fully developed object, accompanied by further discursive analysis.

As the phenomenal field transforms into a world of subjects and objects, a self and others, there is at some point a certain threshold, where scientific, abstract, and conventional concepts - for instance the anatomical and physiological notions of vision, hearing, and the existence of distinct body parts - overpower the direct and synaesthetic experience of a horizon in the phenomenal field, to the extent that the phenomenal field gets lost. The perceptual disappearance of the phenomenal field largely defines Merleau-Ponty's phenomenological agenda, which is to recognise phenomenological awareness as the foundation for all further scientific and analytical knowledge, "because scientific knowledge shifts the centre of gravity of experience, so that we have unlearned how to see, hear, and generally speaking, feel, in order to deduce, from our bodily organization and the world as the physicist conceives it, what we are to see, hear and feel" (ibid., p. 229). Additionally, Merleau-Ponty argues, the process of objectification is necessary for the development of a knowledge about an embodied self, but there is also a danger inherent in the process of objectification:

"The whole life of consciousness is characterized by the tendency to posit objects, since it is consciousness, that is to say self-knowledge, only in so far as it takes hold of itself and draws itself together in an identifiable object. And yet the absolute positing of a single object is the death of consciousness, since it congeals the whole of existence, as a crystal placed in a solution suddenly crystallizes it" (ibid., p. 71).

If the world is exclusively understood as a division of subjects and objects, Merleau-Ponty warns, there is a risk of losing an awareness of how existence simultaneously consists of a wholeness of being. Hence, Merleau-Ponty defines an embodied existence that operates on two different levels of consciousness, the phenomenal and the objective. The foundational role that the phenomenal field plays in relation to embodiment may be seen in his concept of a "body image" (ibid., p. 141). The idea of the body image spans the two distinct levels of the phenomenological process of perception outlined above: the level of the proto-subjective establishment of a horizon in the phenomenal field, and the more stratified level of subjective sense-perception. To Merleau-Ponty, these two phenomenological levels correspond to two clearly distinguishable body images, one body image is abstract, objectified and exists "*in* space, or *in* time" (ibid., p. 139) [italics in original], while the other is of a phenomenal character and "*inhabits* space and time" (ibid.) [italics in original].

It is precisely in the context of Merleau-Ponty's discussion of the difference between the two body images that the case of Mr. Schneider appears, the patient suffering from "psychic blindness" (ibid., p. 103). Although this patient has the capacity to immediately locate and scratch himself on the exact body part of his body where a mosquito is stinging, he is unable to perform bodily actions upon command by an external observer, such as bending and stretching a finger, or locating his head with his hand. Merleau-Ponty describes the cause of Schneider's behaviour as follows:

"As far as bodily space is concerned, it is clear that there is a knowledge of place which is reducible to a sort of co-existence with that place, and which is not simply nothing, even though it cannot be conveyed by a description or even by the mute reference of a gesture. A patient of the kind discussed above, when stung by a mosquito, does not need to look for the place where he has been stung. He finds it straight away, because for him there is no question of locating it in relation to axes of coordinates in objective space, but of reaching with his phenomenal hand a certain painful spot on his phenomenal body, and because between the hand as a scratching potentiality and the place stung as a spot to be scratched a directly experienced relationship is presented in the natural system of one's own body. The whole operation takes place in the domain of the phenomenal; it does not run through the objective world, and only the spectator, who lends his objective representation of the living body to the acting subject, can believe that the sting is perceived, that the hand moves in objective space, and consequently find it odd that the same subject should fail in experiments requiring him to point things out" (ibid., pp. 105-106).

In the above quote, the phenomenal and the objective body images are starkly contrasted. Merleau-Ponty positions the spatial structure of the phenomenal body image as absolutely coexisting with an embodied consciousness of that body. To the phenomenal body image, an itchy spot is not represented as a spatial location, but is a directly experienced embodied relationship. The objective body image, on the other hand, is conceptualised by means of an analytical detour via an objectified world within an objectified space, where a head has its specified anatomical place on top of the shoulders, and a hand, which objectively is positioned at the extremity of an arm, is able to pinpoint the spatial location of the place of the head. To the objective body image, the sting of the mosquito appears as a spatially and anatomically located event, taking place at a certain body part. On the other side, to the phenomenal body, the mosquito sting causes a directly experienced situation of itchy discomfort, where the discomfort itself inhabits space within the phenomenal body image. The reason why a spectator may find it odd that Schneider's hand, which objectively moves with precision to a certain body part as a response to the mosquito sting, should fail to point out the very same body part on command, is rooted in the spectator's failure to perceive the phenomenal body image, which has become entirely hidden behind the objective body image.

As Merleau-Ponty demonstrates, a phenomenological analysis of the phenomenal and the objective body image has the potential to solve the paradox of psychic blindness. However, the reason why the case of Schneider is of interest in this context lies in Merleau-Ponty's identification of two different body images. As I will demonstrate below, the two body images may be applied to, or combined with, the notion of the performative. Just as the phenomenological analysis of Schneider revealed a hidden, phenomenal body image behind the objective body image, it is possible to trace a hidden level of phenomenal performatives which grounds the apparent, or objective, performatives which are inscribed as identities on the surfaces of the body (Butler, 1990). Drawing on Cassirer's (1953) terminology, the performative, the phenomenal, and the objective aspects of embodiment are all part of the first, synthetic, and given multiplicity of perception, and my aim below is to transform the manifold into a constructive multiplicity, accessible by means of reason and rooted in an understanding of the symbol. I will do so through a reading of Susan Foster's (1998) method of applying the concept of performativity to choreography in her text "Choreographies of Gender".

IV. Performative set theory

According to Foster's (ibid., p. 169) reading of Butler (1990; 1993), it is difficult for Butler "to envision how either performance or performativity extends beyond the verbal realm into non-verbal dimensions of human action". As an alternative, Foster (1998, p. 170) aims to develop a notion of performativity that is non-verbal and based on "an analysis of both choreography and performance through a consideration of examples drawn from social and theatrical dance traditions". One of those examples consists of a detailed study of the movements of a female choreographer at work in a dance studio. The practice of the choreographer "traces its origin to the modern dance tradition in the United States" (ibid.).

As Foster relocates the performative from the verbal sphere to the realm of embodied practices, it is possible to identify a certain internal, structural modification of the proportional relationships in the practice/symbol structure of the performative. In Chapter One I traced how Austin's (1975) performative utterances have been criticised and developed by Derrida (1982), and how Derrida's reading was applied by Butler (1990; 1993). In spite of the fact that the notion of performativity went through some radical changes in the hands of Derrida and Butler, it would still comply with Austin's basic performative idea that "by saying or in saying something we are doing something" (1975, p. 12). However, that statement may be interpreted in at least two major ways. The first interpretation suggests that Austin's statement defines the performative utterance as consisting of two functional parts, or dimensions: One part is symbolic, corresponding to the utterance of signifiers; and the other part is practical, as an act of doing or a change in a state of being, caused by the illocutionary or perlocutionary forces which are generated through the performative utterance (ibid., p. 121). According to this interpretation, Austin's basic performative utterance could be described as having two basic dimensions, one symbolic and one practical, as illustrated in Figure 1 on the following page.

The Shapolic The Performative

The Practical

Figure 1: The two dimensions of the performative.

This model is based on an interpretation of Austin's (1975, p. 12) statement that "*by* saying or *in* saying something we are doing something" [italics in original]. The axis designated "The Symbolic" corresponds to the symbolic meaning of an utterance, and "The Practical" axis refers to the performative act of doing, or the practical effect, which is caused by the illocutionary or perlocutionary force generated through the utterance.

(a) The entrance of the phoneme

A second way in which it is possible to read Austin's suggestion that to say something is to do something corresponds to the linguist John Searle's (2005) argument that all linguistic communication involves the performance of speech acts:

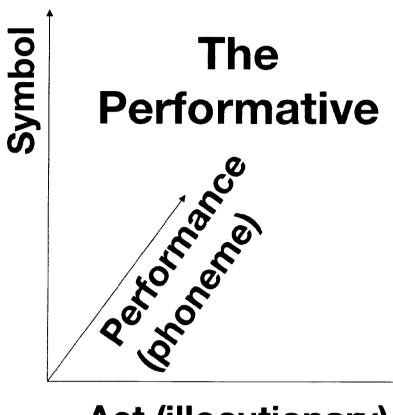
"The unit of linguistic communication is not, as has generally been supposed, the symbol, word or sentence, or even the token of the symbol, word or sentence, but rather the production or issuance of the symbol or word or sentence in the performance of the speech act" (ibid., p. 16).

In Searle's view, intelligible speech always includes both a symbolic and a practical dimension, whether the speech is of a performative character or not. As Searle points out, the performance part of a speech act has at times been analytically neglected, and not fully recognised as a vital part of speech as linguistic communication. However, such was certainly not the case in Derrida's (1973) work *Speech and Phenomena*, which was published only four years after the first edition in 1969 of Searle's (2005) text *Speech Acts*. While Derrida's text is not concerned with performativity, but rather forms a critique of Husserl's transcendental reduction, there is a strong emphasis on the crucial role of phonemes, which are considered as the very substance of expression:

"we ought to consider, on the one hand, that the element of signification - or the substance of expression - which best seems to preserve ideality and living presence in all its forms is living speech, the spirituality of the breath as *phoné*" (1973, p. 10) [italics in original].

From two very different perspectives, both Searle and Derrida emphasise the importance of the phoneme in linguistic communication. The production of a phoneme requires a physical and bodily engagement, or performance, which means that the illustration in *Figure 1* could be complemented by an additional axis, corresponding to the act of performing phonemes. This means that there would be not only one, but two practical dimensions in Austin's performative sentence: The first corresponds to the performance of the speech act, a feature that the performative shares with any other linguistic communication based on speech; and the second practical dimension signifies, as in the two-dimensional model of *Figure 1*, the performative act of doing, or the change of status of a subject (Austin, 1975, p. 94). The two practical aspects of the performative, together with the symbolic function of speech, could be illustrated as a three-dimensional model, which can be seen in *Figure 2* on page 86. In order to

distinguish between the two practical dimensions of the performative utterance, the dimension corresponding to the performance of phonemes is called "Performance", and the dimension corresponding to the illocutionary act of doing is designated as "Act". Each dimension of the performative model in *Figure 2* extrudes in a ninety degree angle from the others, forming a three-dimensional structure.



Act (illocutionary)

Figure 2: The three-dimensionality of the performative.

This 3D model accounts for the crucial role of the phoneme in speech. A performative utterance could be seen as having two practical dimensions and one symbolic. The "Performance" axis corresponds to the performance of phonemes. The phonemes provide the basis for the production of symbolic meaning, represented as the "Symbol" axis. The second practical dimension, corresponding to the "Act" axis, is almost identical to "The Practical" dimension from *Figure 1*, but constituting the performative act of doing exclusively as an effect of the illocutionary force, as opposed the perlocutionary, which was included in the more generic *Figure 1*. In spite of the fact that a performative utterance involves the practices both of a "Performance" and an "Act", there is a significant difference between a performative utterance and a non-verbal performance, in Foster's (1998) sense of the term. Austin (1975, p. 100) briefly touches on the issue of how the actual performance of phonemes during the speech act, as well as additional and contextual non-verbal elements, affects the outcome of the performative. For instance, he points out that "the occasion of an utterance matters seriously, and that the words used are to some extent to be 'explained' by the 'context' in which they are designed to be or have actually been spoken in a linguistic interchange" (ibid.). However, the main part of his discussion is concerned with symbols, not performatives, and even though Austin in passing considers the possibility of performativity being achieved purely through non-verbal means, he concludes, "the fact remains that many illocutionary acts cannot be performed except by saying something" (ibid., p. 120).

(b) Conventionality and ambiguity

The reason why Austin prefers speech to non-verbal expression has to do with the distinction that he draws between illocutionary and perlocutionary acts. An illocutionary act exercises a certain force *in* expressing something, and it must at all times be an act that is *"conventional"* (ibid., p. 122) [italics in original]. The perlocutionary act, on the other hand, is an unconventional act and achieves its practical effect *by* expressing something. The difference could be exemplified through the two following expressions:

"'*In* saying I would shoot him I was threatening him'. "*By* saying I would shoot him I alarmed him" (ibid.) [italics in original].

The first of the above expressions is an illocutionary act, and the second is a perlocutionary act. The problem with Austin's distinction between conventional illocutionary acts and unconventional perlocutionary acts is that, when it comes to non-verbal expression, "it is difficult to say where conventions begin and end" (ibid., p. 119). Nonetheless, in Austin's view, it is important to separate the illocutionary from the perlocutionary, since this distinction is intimately connected to the very possibility of defining or proving the existence of performative sentences at all. As Austin points out, "A judge should be able to decide, by hearing what was said, what locutionary and illocutionary acts were performed, but not what perlocutionary acts were achieved" (ibid., p. 122). The difficulty Austin meets where he considers perlocutionary acts may

be explained in the difference between the preceding graphical illustrations in *Figure 1*, *Figure 2*, and the illustration in *Figure 3* on page 90.

Figure 1 could be seen as a rough approximation of Austin's basic illocutionary and/or perlocutionary acts, where the locutionary force may be exercised either *in* or *by* saying something. Figure 2, on the other hand, represents a more detailed study of Austin's performativity. As pointed out above, an illocutionary performative act is dependent on conventions, whereas the perlocutionary is not. Hence, the perlocutionary act poses a much more fluid and indeterminate relationship between the Performance, the Symbol, and the Act than the functional representation in Figure 2 allows for, where each axis, by means of convention, at every point corresponds to another axis.

However, in the non-conventional perlocutionary act, which may be constituted either by performances of phonemes or by non-verbal embodied acts, conventions would not necessarily assist in the production of symbolic meaning. In fact, a mundane non-verbal act in the form of a bodily movement, such as the repositioning of a leg or a slight change of posture, may appear as exceedingly difficult to read as a specific sign and/or a symbol. In terms of dance, I discussed in Chapter Two how Cunningham's choreographic practices problematised Langer's (1953) rigid definition of art as symbolic form, and the ambiguity about whether his works are to be interpreted as expressive or not could be seen as an example of the difficulty in assigning specific symbolic meaning to bodily movements. Cunningham never explicitly claimed that any of his work expressed or symbolised anything in particular, and yet his work produces in audiences the effect of reading expressive content into Cunningham's dances.

Thus, if one of Cunningham's choreographies were to be seen as performative, it would be in the form of perlocutionary acts rather than illocutionary, and there would be a high level of uncertainty as to what values the Symbol and the Act axes would constitute. Cunningham's work, from a performative perspective, would be strongly dominated by a distinctive presence of the Performance axis, in the form of non-verbal, embodied movements. Any Performance of a movement may or may not, depending on the interpretation of a particular viewer, signify something as a Symbol, which may or may not generate in that viewer an Act as an effect of a perlocutionary force. Because of the ambiguous relationships between the Performance, Symbol, and Act in the perlocutionary act, the particular case of non-verbal embodied performatives may be better illustrated as a set diagram rather than the functions of *Figure 1*³ and *Figure 2.*⁴ Hence, in *Figure 3* below, I have illustrated the Performance, the Symbol, and the Act in the form of such a set diagram.

^{3.} See page 83.

^{4.} See page 86.

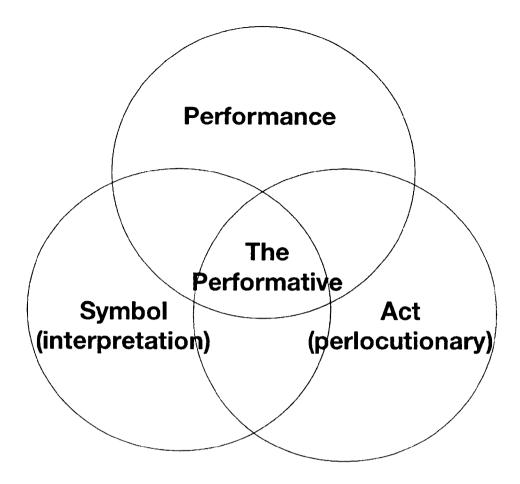


Figure 3: Non-verbal performatives with perlocutionary force.

This model emphasises the ambiguous relationships that exist between Performance, Symbol, and Act in non-verbal performatives based on perlocutionary acts. Any particular Performance may or may not give rise to a certain Symbol, which may or may not generate a perlocutionary force which would give rise to an Act. In *Figure 3*, Performance, Symbol, and Act are represented as three circles, each one intersecting with the other two. In the centre of the illustration, at the point where all three circles intersect, the successful, or complete, performative appears. The large areas of each circle outside the central place of mutual intersection symbolise the relative independence of each circle from the others, as well as the unpredictability and indeterminacy as to how and when a circle would, or would not, apply to the other circles in the generation of a complete performative.

In the preceding sections of this chapter, I have analysed the two phenomenological perspectives of Cassirer (1953) and Merleau-Ponty (1962). I have also developed two distinct models of the performative, clarifying how conventional illocutionary forces generate a mode of performativity that is distinct from the performativity of unconventional perlocutionary forces. Below, I will feed the concepts gained from my phenomenological and performative analyses into a more detailed study of Foster's (1998) development of non-verbal performativity in relation to her example of a female choreographer at work in a dance studio.

V. Swings and flings

Foster (ibid.), describes how a female choreographer performs various flinging, folding, twisting, and turning movements of the entire body as well as of parts and limbs of the body. Through movements, the female choreographer engages a semiotic field of cultural connotations that are attached to the body and the individual parts of the body, such as head, hands, pelvis, or heels. The semiotic connotations in turn inscribe performative identities of gender both on the performer and the perceiver (ibid., p. 171). In my reading of Foster, I am particularly interested in how Foster's performativity could be related to the models of performativity represented in *Figure 2* and *Figure 3*. As a starting point, I will use Foster's representation of how the choreographer initiates her work, and I will interpret the movements as exemplifying the Performance set of *Figure 3*:

"In making a new dance, the choreographer often stands motionless, staring into space, perhaps a mirror's space, for an indeterminate period of time. Then she tries out a move: one arm flings on the diagonal from low front to high back; the body flows after it, motion-filled by its momentum. The leg, initially trailing behind as the last trace of the body's twisted turning, swings suddenly to the front, causing enough impetus to carry the body through a second turn. Exiting from the turn's wildness, the body folds at hip and knee joints, back gently curved, arms arching forward over the head. The choreographer stands back up and resumes her stare" (ibid.).

In my interpretation of Foster's text, the choreographer appears to be developing an abstract piece of modern dance, or alternatively, Foster's representation gives me the impression of abstract movement. In any case, the important point here is that neither the flinging of the arm, nor the sudden swing of the leg towards the front, or the arms arching forward over the head, could readily be described as conventional illocutionary acts. While it might be possible to classify the movements as examples of bodily practices typically belonging to "the modern dance tradition in the United States" (ibid., p. 170), there would still be a lack of consensus as to what those movements specifically would represent, express, or symbolise. Hence, it would be exceedingly difficult to identify any explicit presence of a well defined, conventional, illocutionary force acting *in* the execution of the movement. However, I will demonstrate below that there is in Foster's textual representation of the female choreographer's movements an implicit presence of conventionality, which may be used to trace an appearance of illocutionary acts.

As an example of a conventional idea, Foster notes that the leg of the choreographer initially is positioned "behind" the body. The concept of behindness that Foster refers to is a structuring of geometric space, derived from anatomical conventions of a human body as having a front and a back. This conventional anatomical/spatial framework is once again repeated in the statement that the leg "swings suddenly to the front" (ibid., p. 171). Another convention that Foster's text represents is temporality: the choreographer's leg "swings suddenly" (ibid.). The fact that the swing is sudden not only evokes a notion of time, but a wider framework of spatio-temporal-corporeal conventions. There is a suddenness in the swing, which implies conventions about shortness of temporal duration and a high level of speed, but what about the swingness of the movement? Foster specifically refers to the choreographer's leg movement as a swing, as opposed to, for instance, a kick, sweep, push, or perhaps a throw of the leg. All these linguistic representations of movements implies certain anatomical and physiological conventions as to how force, momentum, and muscular tension are distributed in the movement.

A swing would conventionally refer to something moving back and forth, or from side to side, often along a curved pathway, with an acceleration during the first phase of the movement, a achievement of a maximum speed, and a subsequent deceleration, gradually bringing the movement to a temporary halt. Thus, the notion of a swing conventionally incorporates repetition, a spatially curved pathway, and a temporal division of acceleration and deceleration. The muscular activity involved in a conventional swing must not exercise too much tension, or the curvature of the pathway would possibly be affected, with an accompanying loss of a sense of inertia, gravity, and momentum in the swinging motion. Too much muscular tension may also interfere with the acceleration or deceleration phases of the swing. The characteristics of the swing may be compared to the kick, which typically would be targeted with great forcefulness towards a specific point in space, or a physical item. The sweep would lack the distinct sense of acceleration and deceleration which is present in the swing, but would most likely have a certain swiftness and often follow a curved pathway. The push would most likely have a strong sense of directionality, often supported by the mass of the body and operating towards the anatomical front of the body. Finally, the throw implies an almost explosive acceleration, aiming to bring something up to maximum speed as quickly as possible, and typically followed by a trajectory in space of something having been thrown.

Another convention that Foster refers to is a sense of causality. She describes the swing as generating an impetus, which carries the body through a second turn, according to a rational cause/effect structure. Apparently, there is in the female choreographer a sense of necessary progression from one movement to the next. The second turn is not just by chance, or incidental, but the second turn is indeed an effect of a prior cause, which was the sudden swing of the leg. The structure that Foster represents once again shows a strong temporal character, this time with a chronology in the form of a past, which causally reaches out towards the present.

In Foster's representation of the choreographer's fling of the arm, followed by a sudden leg swing, causing a turn of the body, there is arguably an involvement of both conventional and unconventional elements. While the leg swing as a whole may not constitute a movement that has a conventional symbolic meaning, it is composed of several conventions, such as a leg, a swing, and the spatial locations of a front and a back. Hence, Foster's female choreographer could potentially be involved both in the performance of conventional, illocutionary acts, as well as unconventional, perlocutionary acts. Below, I will outline how the presence of conventionality and unconventionality in the embodied action of the female choreographer may be understood as a performative synthesis, where illocutionary and perlocutionary acts operate in tightly woven layers. I will start by looking at the perlocutionary acts of Foster's choreographer.

(a) The ambiguity of unconventional acts

Foster explains the relationship between embodied movements, symbolic meaning, and a performative inscription of gender in the following way:

"The choreographer constructs relationships of body to momentum, stasis. impulse, and flow and articulates relationships of the body's parts one to another. She engages the body's semiotic field - the connotations that head, hands, pelvis, or heels carry with them, the meanings evoked by tension, undulation, or collapse - and situates the body within the symbolic features of the performance space - the centre, side, high, and low that the architectural context designates. In so doing, she fashions a repertoire of bodily actions that may confirm and elaborate on conventional expectations for gendered behaviour, or she may contrive a repertoire that dramatically contravenes such expectations" (ibid.).

Comparing the model of performativity in Figure 3 to Foster's above description, the Performance set may be seen as corresponding to the bodily actions and movements of the choreographer, the Symbol to the semiotic connotations, and the perlocutionary Act to the inscription of gendered behaviour. Since Foster's semiotic connotations of gender are intimately connected to embodied movements and the relative positions of the various limbs of the body, her attention to detail in the description of the movements of the female choreographer is understandable. Awareness of embodied spatial relationships between the limbs of the body, as well as the temporal and dynamic characteristics of those relationships, are crucial in order to establish the semiotic connotations. However, the problem with Foster's analysis of non-verbal performatives is that she gives a disproportionate amount of attention to the Performance set, but hardly makes any effort to explore the Symbol set. As a result, it is not only unclear how, and in which particular way, Foster's non-verbal performatives achieve their performative force, but it is indeed questionable whether there are any such force present at all. Using Austin's (1975) terminology, the performative may be happy or unhappy, and in Foster's case, it is impossible to identify which is which. Foster does not give actual examples of the specific connotative processes she seems to have in mind in describing the various movements of body parts. In spite of her stress

on the fact that there most definitely are semiotic connotations involved, Foster's text shows a most notable absence of any detailed description of the structure or activity of the assumed semiotic field. Hence, it is impossible to state how the symbolic meaning that Foster connotes from the choreographer's movements relates to her performative gendered act of doing.

For instance, while Foster describes the choreographer as flinging one arm on the diagonal, swinging a leg with a sudden action to the front, or as gently curving her back (Foster, 1998, p. 171), the reader is left to guess how that arm, leg, or curving back is connoted as a confirmation or contravention of gender expectations. The lack of any explicit description of the semiotic field is arguably surprising, since Foster does not pay any attention to the possibility of movements happening outside the scope of such a field. Thus, Foster in effect suggests a reversal of Austin's statement that "to say something *is* to do something" (Austin, 1975, p. 94) [italics in original]. In Foster's case, to do something *is* to say something, in the sense that a body can never escape its anatomical, spatial, and temporal distribution within a connotative semiotic field. However, *what* it is that is being said - in other words: how the Performance set relates to the Symbol and the Act sets - and to what extent there is a presence of illocutionary or perlocutionary forces, all of this remains in question.

The undefined, or ambiguous state of the Symbol in Foster's analysis may be highlighted by a few questions relating to her textual representation of the female choreographer: How would the semiotic connotation of gender alter if the leg that was trailing behind the body were instead held in front of the body? How might the gender identity of the dancer be affected, had the leg not been swung to the front suddenly, but instead, had been gently and reluctantly carried towards the front of the body? Or, which specific semiotic connotations would have been changed, had the leg not caused enough impetus or causal force to carry the body through a second turn?

It would be very difficult to give a comprehensive answer to any of the above questions, since any response would be highly subjective and a matter of interpretation. There is no convention that explicitly prescribes how connotations of gender inscription would change if a leg is suddenly swung to the front, versus gently being carried towards the front, or what difference it would make if the swing produces one turn, two turns, or no turn at all. If the choreographer had decided to completely avoid performing the swing of the leg, and instead held the leg behind the body in a static posture, the spatial and anatomical embodied relationships would be affected by alternative angles, positions, and dynamics. There would be differences in the body's "momentum, stasis, impulse, and flow" (1998, p. 171), producing a whole new set of tensions and undulations of the body. The body would also be situated in a different way "within the symbolic features of the performance space" (ibid.), as the body would fill the spatial dimensions of side, front, back, high, and low differently. In short, if the female choreographer's movements had been altered, her embodiment would, from Foster's perspective, still fashion a repertoire of bodily actions that could confirm or contravene conventional expectations of gendered behaviour. Whatever change or modification that may be applied to the movements of the dancing body, the choreographer would still be part of a performative situation which "dramatises the separation between the anatomical identity of the dancer and its possible ways of moving" (ibid.). However, the question of how and in what way those changes specifically would actualise or alter a performative Symbol and/or an Act remains unanswered.

In an attempt to address the issues around the Symbol and Act of Foster's performative, I will take a closer look at her description of the choreographer flinging one of her arms in a diagonal, as an initiating movement to the subsequent sudden leg swing. I will then further develop the previously expressed idea that within the unconventional, perlocutionary acts of Foster's choreographer, there is an implicit presence of conventional, illocutionary acts. However, in addition to the already established presence of illocutionary acts in her case study, there is also at work another, yet undefined mode of performativity, which I will name the "phenomenal performative".

(b) A plurality of arms

In Foster's representation of the female choreographer, "one arm flings on the diagonal from low front to high back" (ibid.). Notably, the representation concerns specifically one arm, as opposed to a representation of flinging two arms, or even several arms. But since the subject performing the movement is a human being, it may seem paradoxical to suggest a representation of more than two arms. However, I will argue below that there is indeed in Foster's representation of one flinging arm a presence of additional arms, existing as representations at different levels of experience in Merleau-Ponty's (1962) theory on the phenomenal and objective body images.

The first arm that is represented is already mentioned above, it is the anatomical arm of the female choreographer that Foster sees as being flung through the air. This is an objectified arm with particular quantities and qualities: it has the quantity of one, it is involved in a movement with a flinging quality, and it is travelling along a diagonal pathway, related to spatial ideas of lowness and highness, frontness and backness. This objectified arm also inhabits a particular anatomical and embodied space, as it is attached to the shoulder joint, just below the neck, forming a part of a larger bodyobject. However, as a reader of Foster's text, I do not have access to her direct perception of that objective arm. Instead, I am presented with a representation of the objectified arm in the form of the textual signifier "arm". This textual signifier of the objective arm, a third hand construct, forms yet another representation of arm in my mind. My representation of textual signifier "arm" shares many of the quantitative and qualitative features and capabilities of the objectified and anatomical arm, such as the capacity to be moved with a certain momentum, speed, and direction in space.

Returning to the representation of the anatomical, objectified arm, which is derived from Merleau-Ponty's notion of the objective body image, there is also another, complementary representation of the arm that belongs to the phenomenal body image (ibid., p. 139). To address the arm that belongs the phenomenal body image, however, presents a formidable problem: A phenomenal arm may only be conceptualised as such after it has passed through the process of objectification and become part the objective body image. On the phenomenal level, the arm has not yet materialised and cannot be represented distinctively as an arm. Yet, the objective arm grounds itself in that very phenomenal body image. One way of approaching this problem, which is rooted in the practice of linguistic representation, is to conceptualise the phenomenal arm as integral to a phenomenal body image, faintly stratified, and in the process of moving towards a state of objectification. The problem is that once the objective body image is established, the phenomenal body image hides itself. Merleau-Ponty acknowledges the difficulty in trying to express or represent the realm of the phenomenal body image, as it "cannot be conveyed by a description or even by the mute reference of a gesture" (ibid., p. 105).

Any attempt to analyse the appearance and disappearance of the phenomenal arm has to face the challenge of how to address something that is unavailable to convey or express by any linguistic description or embodied gesture. Merleau-Ponty provides some assistance in suggesting that even if a phenomenal arm is not an object that may be readily signified, it is still a perceived phenomenon that has a real existence and, accordingly, it generates a kind of knowledge that may be conceptualised through experience. A phenomenal arm could be described as a perception of space/ embodiment, which on the phenomenal level "is a knowledge of place which is reducible to a sort of co-existence with that place, and which is not simply nothing" (ibid.).

This description of the phenomenal body image could be read in the way that at some level of phenomenological perception, there is a complete integration of existence, experience, body, embodiment, space, knowledge, and place. Merleau-Ponty in fact describes an almost completely undifferentiated state of existence, where nothing is to be known in an objectified sense, which is the pre-natal state, encompassing "nothing but the raw material and adumbration of a natural self and a natural time" (ibid., p. 347). At birth, a process of differentiation starts, as the newly born child "once and for all has been given to himself as something to be understood" (ibid.). Hence, coinciding with the physical birth of a child, there is also a birth of the embryo of objectification and the potential of a constituted, subjective self. Remarkably, the objectifying process is simultaneously a process of the development of subjectivity. Objectivity, from a phenomenological perspective, is from the outset bound to become an objectifying, subjective viewpoint.

Merleau-Ponty's image of an infant, which prior to its birth was a "natural self" (ibid.), a raw material for the objectifying production of subjectivity, or perhaps, the subjectifying process of objectivity, may be applied to the development of a phenomenal-becoming-objective arm. One of the first stages in this process of objectifying differentiation is the development of a knowledge where the becomingarm gradually is stratified as a co-existence with a certain place. Tactile place/existence experiences gradually accumulate a body of knowledge, such as the pain/place knowledge an infant may experience while an external observer sees the infant hitting one of its objective arms on the hard bed frame, or a discomfort/place knowledge, while an observer sees an objective arm being caught underneath the infant's torso. Based on a large series of existence/place experiences, the phenomenal body of a child becomes a stratified, embodied "nexus of living meanings" (ibid., p. 151). The existence of a specific, objective arm eventually develops, which may be used to interact in a world inhabited by other objectifying subjects.

At this point, it is possible to identify up to five distinctive representations of the flung arm in my reading of Foster's text:

- 1. The objective, anatomical and embodied arm of the female choreographer which either is directly perceived by Foster as flung through space, or being a fictional construct.
- The objectified arm of the female choreographer, linked to her objective body image - unless, of course, Foster's example of the female choreographer is purely fictional, or imagined, a condition which in any case does not detract from my subsequent arguments.
- 3. The phenomenal arm of the female choreographer, grounding the appearance of the objective arm that is available for the choreographer to fling through space, and hiding behind the objective arm as part of the phenomenal body image in the form of an experience of place/existence. Again, this arm would only exist if Foster's example is not a work of fiction or the imagination.
- 4. The textual signifier "arm".
- 5. The notion of arm that the textual signifier generates in my mind as a signified.

The reason why the presence or absence of the second and the third representations of the flung arm in no way disrupts the continuation of my discussion is that there are in fact even more objectified and phenomenal arms present in my reading of Foster's text, irrespective of whether the example is fictional or not. Those are the objectified and phenomenal arms of Foster and myself. In fact, the very possibility that the second and the third arms above might or might not be included in my reading serves to give support to and exemplifies the absolutely crucial role played by the body image in relation to perception and representational practices. Indeed, it serves as a preamble to my discussion by an emphasis on the role of the subject, as opposed to the object, in the form of a performative integration of the object into the subject. I will return to discuss this performative constitution of object/subject integration in more detail in the next section, related to the concepts of resonance and coupling. However, I will now turn my attention to how the above listed arms performatively relate to each other, and how their existence illuminates the way in which the materiality of the body may be seen as an interpellated, performative inscription, in accordance with Butler's (1993) performativity.

(c) Phenomenal performativity

The process of generating an objective arm from the phenomenal body image could be read as an illocutionary act, displaying, with some modifications, a presence of all the three dimensions illustrated in *Figure 2* on page 86. In such a reading, the Performance dimension would primarily be constituted by an act, or acts, that generate a phenomenal experience of knowledge/existence/place; the Symbol dimension is a subsequent stratification of the phenomenal experience into an abstract idea of a knowledge of an existence in space; and the Act dimension represents a change of status of the subject, or more specifically, the appearance of a subject in which the phenomenal body image hides behind the objective body image, and by which objective arms of the self and of others may be identified and analysed.

The above description of an objective arm appearing in the Act dimension of a phenomenal performative, forms just one minor part of the entire nexus of live and embodied meaning that forms the entire constitution of objectifying subjectivity. As the arm performatively develops towards a distinguishable object, it also gathers the ability to perform meaningful objective actions, for instance corporeal performatives, such as the fling as described by Foster. However, already on a slightly stratified phenomenal level, where physical tactility is barely noticeable as a distinctive and discrete phenomenon, the arm is in fact involved in meaningful acts, or performances. Merleau-Ponty describes how those performances of the phenomenal arm manifest:

"A certain tactile experience felt in the upper arm signifies a certain tactile experience in the forearm and shoulder, along with a certain visual aspect of the same arm, not because the various tactile perceptions among themselves, or the tactile and visual ones, are all involved in one intelligible arm, as the different facets of a cube are related to the idea of a cube, but because the arm seen and the arm touched, like the different segments of the arm, together *perform* one and the same action" (1962, p. 151) [italics in original].

The description above outlines the vague and homogenous performance of the phenomenal arm in relation to a more objectified anatomical structure, including tactility and vision, but it is also possible to read a certain presence of acts of doing, or a continuous performance, in the stratification of the phenomenal arm, as it takes several facets to construct the idea of a cube. Accordingly, the becoming of an objective arm may be understood as a continuous series of performative Performances, gradually and incrementally establishing all the different segments and facets of an arm, and in this sense, the phenomenal arm becomes an objective arm by means of an endless repetition of incrementally accumulating Symbols and Acts. Eventually, the repeated performances of the phenomenal arm collectively constitute the objective arm.

(d) The mediating function of hybrid illocutionary acts

The above discussion on how Foster's (Foster, 1998) female choreographer's objective arm can be read as phenomenal performatives which are arranged in repetitive series, gives a special kind of understanding both to Foster's perception of the fling of the arm, as well as to my reading of Foster's representation of it. The presence of phenomenal performatives in Foster's perception and my reading of her representation have the potential, as it were, to guide our respective interpretations. As a contrast: if I were to treat Foster's textual representation of "arm" as a signifier that carries its own inherent meaning, without any link to a different order of representation in the form of a phenomenal arm, the "arm" signifier could correspond to a wide range of possible denotations. For instance, "arm" could refer to one of my own embodied arms, someone else's arm, the arm of a monkey, a robot, or it could be the sleeve of a garment. The "arm" could be an actual, material arm, either of organic or mechanical character, or it could be an abstract arm, a graphical representation, or perhaps a computer generated simulation. To conclude, there is a vast range of possible ways on how to denote the signifier "arm" in isolation from a system of relative difference.

Modern linguistics clearly demonstrates that an analysis of the meaning of linguistic expression cannot be reduced to the individual signifiers, but there is always a context (Searle, 1981). Moreover, according to Derrida (2002, p. 63), language is always in danger of failure owing to its lack of inherent meaning. Instead, he suggests that meaning is derived from a fundamental notion of difference, in the form of "difference", or "the origin of presence itself". Hence, in Derrida's view, meaning is derived from orders of difference in expression and representation:

"This differance is therefore not more sensible than intelligible and it permits the articulation of signs among themselves within the same abstract order - a phonic or graphic text for example or between two orders of expression" (ibid., pp. 62-63).

The significance of the phenomenal performatives is precisely that they provide an alternative order of representation and expression, which because of its relative difference lends meaning, not only to linguistic and textual signifiers, but also to the objectified body image. Thus, when I read Foster's (1998, p. 171) description where "one arm flings on the diagonal from low front to high back", this text acquires its particular meaning to me as I link the textual signifiers, such as "arm", to certain signifieds. However, the crucial point, from the perspective of performative phenomenology, is that I would not be able to link the signifier "arm" to the objective and embodied arm of the female choreographer, had I not already constructed, or been constructed as, an objectified, gendered, and embodied subjectivity. This construction takes place in the form of series of repetitions of, as it were, embodifying phenomenal performatives. Collectively, all the repetitions of phenomenal performative series relating to the body image constitute the synthetic performative/phenomenological context from which I am able to derive the various facets, aspects, qualities, and quantities of an objective arm being flung through the air.

Thus, in my perception of Foster's non-verbal and unconventional performatives, there appears to be a deep and irreversibly embedded presence of phenomenal performatives, constituting my body image. The question is: how do those performatives take part in my textual production of meaning as I read Foster's text, and how do they participate in the generation of Foster's connotations of gender and the semiotic field? I have already introduced the idea that there may be illocutionary forces acting within the non-verbal performatives, in the form of conventions of anatomical, spatial, and temporal character. In fact, it is possible to identify at least four conventional illocutionary forces embedded in Foster's representation of the choreographer's fling of one arm: numerical quantification, human anatomy, notions of space, and temporality.

At this point, Foster's non-verbal performatives may in fact be summarised as a composite layering of a multitude of performativities, which may be grouped into three main categories. First, there is the non-verbal, unconventional performative of perlocutionary character that is explicitly addressed in Foster's text. This

perlocutionary act is internally constructed as a performance of dance movements by a female choreographer, corresponding to the Performance set in *Figure 3* on page 90. The Performance is perceived by an audience, which in this case primarily is constituted by Foster's sense-perception, and secondarily in my reading of Foster's textual representation. As an audience, Foster and I give connotative meaning to our perceptions of the Performance, and this production of meaning corresponds to the Symbol set, which in turn, supposedly, affect our identities as gendered subjects. As our subjectivity is affected, there is also a perlocutionary force at work, corresponding to the Act set in *Figure 3*.

However, I have already suggested that the situation of generating a performative situation based on the Performance, Symbol, and Act of *Figure 3*, corresponding to the perception of a dancing female choreographer, is dependent on a complex performative relationship between the phenomenal and the objective body images. For instance, the process of generating an embodied subject from the phenomenal field, with its corresponding objective body image, and the notion of analytical embodiment, such as the presence of an objectified arm, could be explained as synthesised repetitions of series of phenomenal performatives. Those series do not appear explicitly to the senses, since they in fact hide behind objectified conventions of, spatial, temporal, and anatomical character, such as sense perception. Thus, there is always a mediating performative layer operating in between the phenomenal performative series and Foster's non-verbal perlocutionary acts. This mediating performative layer is neither of a purely illocutionary character, nor is it perlocutionary. Rather, those mediating performatives are hybrids, covering the realm of the phenomenal, the objective, as well as the illocutionary and the perlocutionary.

The Performance set/dimension of the mediating performative layer consists of the synthesis of the repetitive series of the phenomenal performatives, giving rise to a Symbol set/dimension that specifies a particular convention, such as an embodied anatomical structure, a spatial concept, or a mode of temporality: for instance, an arm, flung in a diagonal. As those conventions appear, the notion of embodiment decisively shifts from the sphere of the phenomenal into the objectified, corresponding to an Act set/dimension. The first set/dimension of this mediatory performative originates in the realm of the phenomenal field, and hence, it cannot be defined as conventional, as the phenomenal field precedes any convention. Collectively, however, innumerable

repetitions of phenomenal performative series give rise to a process of synthetic, conventional objectification, grounding the notions of the body, space, and time. Hence, while the hybrid performatives originate as non-conventional Performances, they end up as conventions in the form of Symbol and Act sets/dimensions. Based on those hybrid performative conventions, further illocutionary and perlocutionary acts may be performed, citing the cultural conventions of a semiotic embodied field.

The body image, as a synthetic performative construct, could thus be charted as in *Figure 4* below. From repetitive performances of knowledge/place in the phenomenal field, the various facets of the Symbol set are collectively synthesised, and a vaguely stratified phenomenal body image eventually appears in the form of a primary Act set. The phenomenal body image in turn provides the foundation for the hybrid performatives described above, which establishes basic embodied conventions of ordinal, spatial and temporal character. By means of performing the embodied conventions, Symbolic meaning is generated as, for instance, symmetries and asymmetries, accelerations and decelerations, upwards, downwards or diagonally across, constructing an Act of a fully objectified body image inserted in a semiotic field: the level where perlocutionary acts, such as Foster's non-verbal performatives, may come into play.

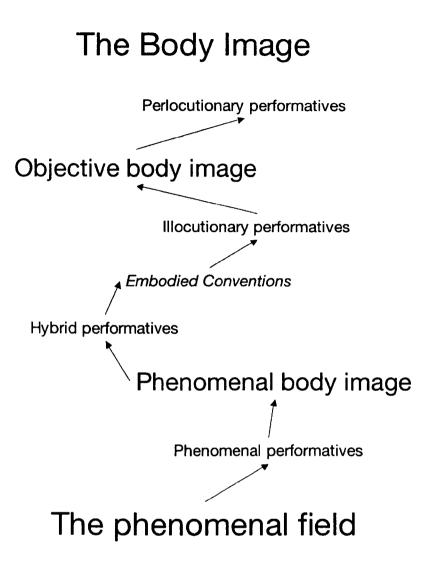


Figure 4: The synthetic character of the body image.

An overview of the performative constitution of the body image, mapping the various performative layers from the phenomenal field and up to the objective body image, which is capable of performing perlocutionary acts.

VI. Resonance

One question that may be raised by a glance at *Figure 4* is: how is it possible that the different kinds of performatives, the phenomenal, the hybrid, the illocutionary, and the perlocutionary, all appear as if they were one homogeneous performative event, as in the case of Foster's non-verbal performatives? The answer that I will suggest is intimately connected to the dynamic characteristics of the phenomenal performative. Arising from the phenomenal field, the phenomenal performative series do not spring into action of their own accord, neither do they share the objectified capacity to have an enduring presence in time. Instead, the phenomenal performative series exist in the form of an active potential to the generation of repetitive series in itself. Operating underneath the surface of the objectified body and sense-perception, the phenomenal performative series are always ready to appear as transitive Performance sets/ dimensions.

previously have viewed the phenomenal performative from While I а phenomenological perspective, where the phenomenal field grounds the objectified world, the roles of the phenomenal and the objective have to be restructured when looked at from a performative perspective. In order to move into action, the phenomenal performative series need a trigger, which, as I will demonstrate below, arrives in the phenomenal field from the objective realm. The function of the trigger is particularly evident in my reading of Foster's textual representation of the female choreographer. When I read the textual abstraction "one arm flings on the diagonal from low front to high back" (ibid.), it is the textual signifiers that trigger the phenomenal performative series to rise within me. The series then establish the synthesised condition under which the Performance set/dimension of the hybrid performatives may trigger a constitution of all the anatomical, spatial, and temporal conventions that I need in order to generate the illocutionary performative Act dimension corresponding to the perceived movement of Foster's flinging arm. Once this has happened, I am able to connote the movement as a non-verbal perlocutionary performative of a female dancer.

The above described performative system, has a structural analogy in Deleuze's account of two synthetic processes which combine to generate temporal conventions, in the form of a past, a present, and a future:

"The first synthesis, that of habit, is truly the foundation of time; but we must distinguish the foundation from the ground. The foundation concerns the soil: it shows how something is established upon this soil, how it occupies and possesses it; whereas the ground comes rather from the sky, it goes from the summit to the foundations, and measures the possessor and the soil against one another according to a title of ownership. Habit is the foundation of time, the moving soil occupied by the passing present. The claim of the present is precisely that it passes. However, it is what causes the present to pass, that to which the present and habit belong, which must be considered the ground of time. It is memory that grounds time" (1994, p. 79).

Similarly, the phenomenal performative series provides the foundation of conventional performative embodiment in space and time, analogous to Deleuze's "habit", and no performative embodiment would, from a phenomenological perspective, make any sense if it was not rooted in the "soil" of the performativity inherent to the phenomenal field. The synthesis of phenomenal performative series is the foundation of habits of conventional performative embodiment, and the "claim" of the phenomenal performativity is precisely to make something objective come into being, and it is what causes the conventional to come into objective being which must be considered the ground of performative embodied conventions. It is a representation, which I will call the "Sign", that grounds embodied conventions. To reiterate Cassirer, since the real is impossible to approach directly, we "must set up a system of signs and learn to make use of these signs as representatives of objects" (1953, p. 45).

Thus, when Foster's objectified arm reaches its summit of abstraction, in the form of the written representation "arm", that abstract arm claims ownership of the phenomenal foundation, "the soil" and evokes within me a repetitive series of phenomenal performatives, which gives rise to conventions, and I start to objectify a rerepresentation of the non-verbal embodied performative represented in Foster's text. If the Sign, in this case the abstract signifier "arm", fails to trigger or evoke the phenomenal performative series, the Sign is in danger of losing itself in subjective ambiguity. Devoid of any performative phenomenological ontology, as an order of relative difference, the Sign has no means of integrating with an embodied nexus of living meaning, and as a result, the representation fails to partake in the generation of embodied meaning as no phenomenal performative series are triggered. The Sign is in this case unable to affect my constitution of subjectivity.

Looking at the above structure of the relationship between the Sign, the phenomenal performative, and the non-verbal performative, it appears that I have in fact identified yet another class of performativity. An analysis of this as yet undefined performative in terms of Performance, Symbol, and Act will reveal that it encompasses all the previously discussed performative classes, providing a structural framework for the rest. Hence, it may be identified as a meta-performative and I will use the term "abstract performative" in order to address it, due to the fact that it is grounded in the abstract representation of the Sign.

The Performance set of the abstract performative refers to the act of directing my subjective gaze towards, or performing a reading of, the Sign, in this case corresponding to Foster's "arm". The Symbol set consists of the meaning that I derive from my gaze, or my reading, and the Act set includes the combined constitutional effect on my subjectivity, as a synthetic construct, of all the various kinds of performativity that I previously discussed, both on the objective and the phenomenal levels.

However, since the Symbol set in this case does not originate from the phenomenal field, but is generated through a reading of an abstract symbol, the Sign, the performative constitution of my sense of an embodied self, or the Act set, corresponds to the establishment of a feedback loop between the symbolic and the phenomenal. The feedback loop is is established in the sense that while the phenomenal performative series ultimately provides the foundation for the Act set, it is my reading of the Sign that triggers the series into action. Hence, the Sign grounds the phenomenal foundation. On the other hand, my very capacity to perform a subjective reading, or to direct my gaze towards an object, is dependent on my construction of a body image. The body image, in turn, has been defined as originating from the phenomenal performative series, via the phenomenal body image. Yet, the activity of the phenomenal performative series is triggered by my reading of the Sign. This means that in the abstract performative, everything absolutely coexists and nothing causes the other. Rather, the Performance, the Symbol, and the Act are engaged in an immediate and

dynamic feedback loop in which the subject continuously reconfigures the very condition of its own appearance.

There is, however, one lingering problem concerning agency related to the feedback system of the abstract performative. Since the Performance, Symbol, and Act are all dependent on each other, who or what starts the process of reconfiguration of the subject? It is quite clearly not the subject itself, since the appearance of the subject is grounded the external Sign. On the other hand, the Sign needs to be transformed into a Symbol by means of a Performance by the subject. The issue of agency in the abstract performative is related to Butler's (1993, p. x) questioning of the operating agency in her own definition of the performative as an inscription on bodies: "if there is no subject who decides on its gender, and if, on the contrary, gender is part of what decides the subject, how might one formulate a project that preserves gender practices as sites of critical agency?"

This "critical agency" is engaged in the performative processes inherent in the appearance of a subject, making a Performance in the form of an objectified, and objectifying, gaze towards the Sign. But since the Sign is external to the subject, the critical agency is not entirely in control over the Symbol and the Act sets, which in turn affects the Performance set. Hence, the critical agency of the abstract performative seems to be a hybrid or quasi-agency: partly constituted by the gaze of the subject, as an interpellation from the social matrix (ibid.); and partly by the dynamic reconstitution, owing to the feedback loop within the abstract performative, triggered by the external Sign.

The critical agency of the abstract performative, it appears, reveals itself as a synthetic construct of disparate series in communication with each other, operating on different phenomenological layers, and together, they performatively constitute meaning in the form of a subjective reading of that which is perceived, demonstrating a close affinity to my earlier reference to Derrida's (2002) concept of differance.⁵ Additionally, the structure of the abstract performative - characteristically a heterogeneous system of disparate parts, where the various parts intimately communicate with each other, and continuously modulate each other through feedback loops, forming a dynamic, self-

^{5.} See page 102.

regulating system, where meaning is derived from the relative differences between the systems, and the differences of those differences - also shows a strong resemblance to Deleuze's (1994) description of how a system which produces or communicates meaning is dependent on the idea of an internal resonance:

"A system must be constituted on the basis of two or more series, each series being defined by the differences between the terms which compose it. If we suppose that the series communicate under the impulse of a force of some kind, then it is apparent that this communication relates differences to other differences, constituting differences between differences within the system. These second-degree differences play the role of the 'differenciator' - in other words, they relate the first-degree differences to one another. This state of affairs is adequately expressed by certain physical concepts: *coupling* between heterogeneous systems, from which is derived an *internal resonance* within the system, and from which is derived a *forced movement* the amplitude of which exceeds that of the basic series themselves" (ibid., p. 117) [italics in original].

Based on Deleuze's analysis, the previous issue of agency could hence be reformulated as a question of what kind of force that causes the different series to communicate within the abstract performative. Deleuze identifies this force as "an invisible, imperceptible *dark precursor*" (ibid., p. 119). Below, I will turn my attention to the dark precursor of the abstract performative, aiming to identify how and why the disparate series of the abstract performative are coupled together as a resonating system, in the form of a performatively self-reconstituting subjectivity.

(a) The non-causality of the Sign

Deleuze's (ibid.) notion of resonance poses a challenge to my application of his theory in the sense that he refers to the resonance of a physical system. However, the abstract performative is not primarily a physical system, but a performative system that operates on different levels of phenomenological perception and awareness. Hence, a phenomenological approach towards resonance would be more appropriate than an explanation based on physical science.

The idea of resonance has been thoroughly explored by the French phenomenologist Gaston Bachelard (1994) in his work *The Poetics of Space*. Bachelard discusses reverberation in relation to a reference to the psychiatrist and phenomenologist Eugene Minkowski. According to Bachelard's reading of Minkowski, reverberation has a most

profound ontological meaning, in that life itself is seen as a reverberation. The concept of agency is addressed in Minkowski's philosophy in that the vibrations are not due to some external source, but life reverberates as part of its own intrinsic being, and as a part of its interconnectivity to all extrinsic being, which through reverberation unifies the intrinsic and the extrinsic. Thus, the reverberation is shared, and it is in the unifying force of that sharing that the world comes alive: "I believe that this is precisely where we should see the world come alive... And this life itself will reverberate to the most profound depths of its being, through contact with these waves, which are at once sonorous and silent" (Minkowski in ibid., p. xvi). One of the main attributes that Bachelard ascribes to a reverberating system is an absence of causality. In fact, Bachelard even refers to the idea of reverberation as being "the opposite of causality" (ibid.). In another work, The Dialectic of Duration, Bachelard (2000) also opposes the notion of causality, and instead hints at the presence of an essence, which is passed on between phenomena: "A phenomenon is the cause of another phenomenon. Things pass the cause to each other; they do not give rise to it. A cause of itself is either a tautology or else a god" (ibid., p. 69).

It appears that both Deleuze and Bachelard suggest the existence of something which transgresses levels of difference, intrinsic and extrinsic, into a resonating system of unified being. In Deleuze's case, the communication between the series depends on a force, the invisible dark precursor; and in Bachelard's case, the world is a living nexus of being, interlinked by the continuous exchange of a non-causative cause without any apparent origin. Hence, the thing that is exchanged, in the case of both Deleuze and Bachelard, is not that which is represented. Deleuze's communication between the series is only a representation of the activity of the dark precursor in its affirmation of difference, and Bachelard's cause which passes between phenomena does not actually cause anything, but it allows a phenomenon to appear as if it gave rise to a new phenomenon. This process of hiding the actual transgression of difference behind the appearance of a representation may be exemplified by means of another close look at Merleau-Ponty's (1962) analysis of Mr. Schneider, the patient suffering from psychic blindness.

According to Merleau-Ponty, Schneider's condition makes it possible to identify a certain presence of something that is impossible to express or represent, yet has a most vital influence on the embodied existence of the patient: "it is clear that there is a

knowledge of place which is reducible to a sort of co-existence with that place, and which is not simply nothing, even though it cannot be conveyed by a description or even by the mute reference of a gesture" (ibid., pp. 105-106). The knowledge/place coexistence, which neither is communicated, nor constitutes a cause or an effect, is deeply embedded in the structure of embodied being. Yet, the knowledge/place is somehow involved in the appearance of a description, a reference, or a gesture. Below, I will first investigate some of the details in the case of Schneider, and based on this examination, I will propose how the idea of the abstract performativity could be used to clarify the relationship between the notion of knowledge/place, representation, and reverberation.

Schneider's scratching of his body could be seen as an immediate response on a phenomenal level to the mosquito's sting. Schneider does not need to objectify his body in order to communicate, as it were, with the mosquito's action, but to the contrary, both the sting and Schneider's scratch belongs to one unified, reverberating phenomenal experience of itchy-unpleasantness/knowledge/place. The reverberation generates in Schnender an immediate response, in the form of a hand action. The reverberation involving the hand does not occur in the sense that the hand feels the same unpleasantness as the spot that was stung by the mosquito, but in the sense that a direct relationship of difference is established between a certain knowledge/place/ potential-to-scratch, which objectively corresponds to the hand, and the knowledge/ place/unpleasantness, which objectively speaking is the embodied space of the mosquito bite. The internal difference produced in Schneider through the reverberation could also be expressed as a desire to scratch.

The gesture performed by Schneider, in the form of his hand reaching towards and scratching the itchy spot, may objectively express a desire to scratch, or a sense of discomfort. However, from the perspective of phenomenal reverberation, the scratching movement in fact cancels out the difference of the reverberation which couples the hand to the itchy spot. As the scratching action unfolds, the itching, the desire, and the reverberating difference corresponding to the desire, is transformed through a phase shift in the reverberation, as the desire to scratch is replaced by a sense of satisfaction. Hence, the reverberation and the corresponding difference in Schneider is cancelled out.

To the external observer of Schneider's scratching gesture, there is an entirely different experience of the event. The observer neither experiences the reverberating coexistence of a unified knowledge/place which becomes stratified into a sense of unpleasantness and a potential-to-scratch, nor the self-cancellation of the reverberation through a fulfilment of the desire to scratch. However, the observer does to some extent reverberate with the patient, in the sense that Schneider's scratch gesture takes the role as the Sign in the abstract performative. The observer sees an objectified representation of a hand, aiming towards another part of a body where a scratch movement is performed. As the scratch unfolds, it grounds in the observer the convention of an embodied experience of itchiness.

At this stage, from the perspective of the observer, the resonance coincides with the expressive scratch gesture, representing the experience of itchiness. Moreover, the gesture seems to be involved in a series of causative events, where the the sting of the mosquito causes an itchiness, which in turn causes the scratch gesture. One important aspect of the relationship between the expressive gesture and the observer is that the observer does not necessarily feel any actual itching him/herself. Instead, the itching may be experienced as a quasi-sensation of discomfort, or in Merleau-Ponty's (ibid., p. 236) terminology, a "primordial significance". The concept of primordial significance is highly relevant to the phenomenological principle of embodied reverberation, as Merleau-Ponty explains:

"In short, my body is not only an object among all other objects, a nexus of sensible qualities among others, but an object which is *sensitive to* all the rest, which reverberates to all sounds, vibrates to all colours, and provides words with their primordial significance through the way in which it receives them" (ibid.) [italics in original].

The idea of primordial significance provides an explanation of how a body may be sensitive to resonate with "all the rest", including representations of a symbolic character. For instance, by hearing an utterance of the word "warm", my body temperature would not normally increase, but I would, according to Merleau-Ponty, reverberate with the utterance in the sense that I give the word a primordial significance, to the effect that my body reacts with a corresponding "quasi-sensation" in that it "prepares itself for heat" (ibid.). My subjective embodiment involves a certain sensitivity towards warmness, and it is this sensitivity that makes it possible for me to

lend a resonating primordial significance to the utterance of the word "warm". Accordingly, as I also have an embodied sensitivity towards itchiness, I may lend a certain primordial significance to the expression of a scratch gesture, which generates in me a quasi-sensation that prepares, as it were, my body for itchiness.

In my above reading of the case of Mr. Schneider, I have in effect outlined a framework of abstract performativity, where it is possible to read the scratch-gesture as a connection point between two different, but reverberating, systems. The scratch gesture both serves as a symbol that expresses or represents itchiness, as well as providing the ground for phenomenal performative series to generate an embodied idea of discomfort, and thus, the gesture takes the role of the Sign in the abstract performative. In the coupling established between the two disparate embodied systems, the grounding function of the gesture is distinctively not representative or symbolic, and it does not express anything on an objectified level. Instead, it constitutes the establishment and affirmation of difference, like Deleuze's dark precursor. Also, as in Bachelard's non-causal reverberation, one embodied system does not cause the other system to reverberate, but the cause that is passed on is rather an establishment of orders of difference between the systems. The difference between the two reverberating embodied systems could, in the case of Schneider, be exemplified by means of how the reverberation is cancelled out in the two disparate embodied systems, connected by the Sign-scratch-gesture. On Schneider's side of the Sign, the cancellation occurs as a phase shift represented by an experience of desire to scratch towards the satisfaction of having satisfying that desire. On the side of the external perceiver, the reverberation is cancelled out in a very different way, as the perception of an objectively performed movement, expressing the activity of scratching, triggers the phenomenal performative constitution of an embodied convention of discomfort, represented through the primordial significance that is given to the Sign.

To summarise, on the objective and representational level of the Sign, Schneider's scratch-gesture appears as causative, both in the sense that it could be understood as an effect of the mosquito bite, as well as causing an expression of itchiness. However, on the level of phenomenal reverberation, the Sign establishes an order of difference between disparate embodied systems which are unable to directly communicate with

each other. Instead, the two systems aim to cancel out their relative difference through perception, expression, and representation.

As in a physical system of resonance, nothing leads and nothing follows, but all elements sustain the reverberation together, until a phase shift somewhere within the system disrupts their coupling. Alluding to Bachelard (2000), the cause, as it were, of the resonance, is not passed on from one phenomenon to the other, but each phenomenon already has a certain shared preparedness, or dormant sensitivity, towards resonance. A vibration, a gesture, or a movement, does not cause resonance, but merely provides a point of coupling with an inherent order of difference, which aims to cancel out the immediate reverberation as a phase shift in the system. This is the role of the Sign in the abstract performative.

VII. Conclusion

My discussion on phenomenology and performativity has given rise to the concept of abstract performativity, and the role played by the Sign, both as a representation and as a nexus point of coupling between disparate systems which resonate in their production of phenomenal performative series. The Sign does not cause any series to come in to existence, but those series already exist in a quasi, pre-objective state, even prior to the appearance of the Sign, in the form of a certain sensitivity and potential in the embodied subjective system to give primordial significance to the Sign. The primordial significance appears to the subjective perception as performatively constituted embodied conventions. However, as the Sign couples the disparate embodied systems, it also establishes an order of difference which aims to cancel itself out by means of the phenomenal performative series. Simultaneously, the Sign serves its double role as an expression or representation, such as a movement, a gesture, or an anatomical body part.

In the examples by Foster and Merleau-Ponty which I have discussed in this chapter, the established coupling was of a rather limited character, typically involving second and third hand descriptions of one performer, one observer, and one movement/gesture. However, the Sign of the abstract performative has the capacity to establish coupling, not only through stacked layers of representational practices, but also well beyond the situation of two embodied subjects and the performance of a gesture. In the next chapter, I will advance the phenomenological/performative position of the abstract performative by means of giving it a more cybernetic character, demonstrating how the abstract performative may establish coupling through a wider range of Signs, or orders of difference.

Chapter 4: The cybernetic performativity of *BIPED*

Chapter Four follows on from the previous chapter in that it will provide examples of abstract performativity. The chapter is centred on observations of two extracts from Merce Cunningham's BIPED (1999). The observations serve two major purposes: First, to advance the notion of the abstract performative into a cybernetic performative, similar in structure, but more extensive in its scope; and secondly, to exemplify how observational practice may be understood in terms of two different modes of perception, the analytical and the intuitive. Since this study is mainly a phenomenological approach to perception, I will only briefly illuminate how the analytical perspective may consist of a mapping of the various objectified parts of the cybernetic performative, which in its extended sense also will be referred to as a "metasubject". The intuitive mode of perception, however, is the topic to which I will devote most of my attention. The reason why intuition is of such a vital concern, I would argue, lies in its close relationship to the virtual in Bergson's philosophy (1908), and in Deleuze's (2002) reading of Bergson. In fact, intuition is proposed by Deleuze as the method which serves to divide the composite of lived experience as a perceived duration into that of the actual and the virtual. However, towards the end of the chapter, I will use the particular temporality constituted by the cybernetic performative as an example which demonstrates how Deleuze's specification for the intuitive method is not quite applicable to the cybernetic performative, and consequently, I will suggest a revision of the model of the intuitive division as proposed by Bergson (1908).

The two extracts from *BIPED* that I will describe in this chapter, which are included as $Clip \ 1$ and $Clip \ 2$ on the attached DVD, are chosen because they represent two examples of how difference both produces, and is produced within, the cybernetic performative. The identification of difference is at the very heart of the method of intuition, and hence, the two clips serve to illuminate the same basic subject as variations on the same thing, or rather, absence of a thing, as they point towards the role of difference in itself. Hence, strictly speaking, there is no need for two extracts, as one would suffice to exemplify the role of difference. However, the two clips do complement each other in the sense that $Clip \ 2$ lends itself more effortlessly to an analytical, or macroscopic perspective, on the cybernetic performative inherent in

BIPED, whereas *Clip 1* gives a clear example of how subjective perception constitutes repetitions of temporal durations as multiplicities. Crucially, however, both clips serves to illustrate, from different perspectives, certain intuitive relationships between repetition, representation, the similar, and the different.

It is important to note that *Clip 1* will remain in focus throughout the last three chapters of my discussion, and hence, the main development of the durational implications of *Clip 1* will take place in Chapter Five. In this chapter, *Clip 1* will mainly serve as a practical example of the performative phenomenology that was outlined in the previous chapter, and in that sense complement my macroscopic perspective on *Clip 2*. The discussion highlights how the use of technology, both inherent in the creation of *BIPED* and in its representation as a video clip, alters the intuitive duration of the metasubject, and in this context demonstrates the insufficiency of existing theory on intuition.

II. Attention to **BIPED**

Created in 1999, *BIPED* is a collaboration between Merce Cunningham, Gavin Bryars as composer and musician, Paul Kaiser and Shelley Eshkar as visual artists, and Suzanne Gallo as costume designer. While the length of the entire work *BIPED* is about three quarter of an hour, the first extract in my study of *BIPED* is about fourteen seconds long, occurring in the latter part of the work, approximately five minutes before the end.

For many years, Cunningham was using computer technology as an aid in his choreographic practice. By means of animating and manipulating humanoid, computer generated avatars in a simulated, or virtual, space, Cunningham provided his dancers with images of forms, shapes, and movements that he has asked them to transform into embodied human movement. In *BIPED*, however, Cunningham explores an additional computerised technology called "motion capture" (Atlas et al., 2001, video on DVD), which involves the reading and digitisation of actual human movements. Motion capture differs from video technology not only in that the motion capture does not record a visual image, but also in that while a video recording only records in two spatial dimensions, motion capture records in three spatial dimensions. During Cunningham's motion capture sessions, data from each of the motion capture cameras were fed into a computer, which interpreted the data and produced a three-dimensional simulation of the movements. The three-dimensional simulation was further subjected

to data processing and manipulation by Kaiser and Eshkar, and the data, in a reencoded form, were represented as projections on a gauze situated between the stage and the auditorium in the theatre. The process of encoding and re-coding the movement data enables a wide range of graphical possibilities, and the encoded movements are in *BIPED* sometimes represented as moving dots, lines, moving abstract geometric forms, or shapes reminiscent of human bodies.

Apart from the computer generated images, the set design and decor of *BIPED* is sparse. There are no props in use, but only the gauze in front of the stage, on which the computer generated shapes are projected. The backdrop is black and absorbing most of the light falling on to it, so that the dancers can enter or exit the stage through the backdrop without any clearly visible openings in the black surface.

BIPED begins with a solo. A dancer enters from stage right and moves towards centre down stage in a series of quick, clockwise turns, with the arms stretched diagonally upwards and sideways in the air. The turning is sequenced with little hops, tilts, and various bends of the torso, where the dancer's support sometimes is on strong, straight legs, and sometimes in deep plies. The movements could possibly be described as being "recognizably Cunninghamesque" (Banes, 1994, p. 106). In a recent video commentary on *BIPED*, the *New York Times* critic Alastair Macaulay (2009) points out how the movements in a different solo from *BIPED* show many of the key characteristics of Cunningham's dance technique and choreographic legacy, including the frequent bending of the torso, the use of turnout, the articulation of the instep of the foot, and changes of pace. One particular feature that Macaulay highlights in the solo is the dancer's use of "fourth position", which, he argues, is "a favourite position that characterises so much Merce Cunningham choreography".

The opening solo, displays all the features that Macaulay identifies as being representative of Cunningham's choreographic tradition, and as *BIPED* unfolds, the movement content and style largely operates according to the same principles. There are moments when the dancers are strongly grounded, holding stances with deep plies, as well as moments of speed and airiness, with dancers operating on demi-point, turning, jumping, skipping, and running. One section of the work, however, differs rather markedly both in my perception of the movement quality as well as in the costume design, created by Suzanne Gallo. The movements change from their rather

controlled character to become more, as it were, free-flowing and with an increased sense of lightness. During this section, the dancers wear thin, gauze-like garments of a looser cut and more freely flowing quality on top of their leotards. The looser form of the garments leaves traces of garment in the pathways of the movements of the dancers, giving the impression that the movement lingers on in space/time just a moment longer than the duration of the movement of the passing limb.

The first dancer entering the stage wears a leotard, exposing the dancer's skin on the arms, legs, and shoulders. This dress style is repeated for all the dancers, only with the difference of revealing or covering varying body parts: one dress has longer legs, another a hole at the side of the torso, yet another covering the shoulders, or there is an exposure of the back. The surface material of the dress is shiny and multicoloured, reflecting the stage lighting, and creating continuously morphing patterns of light on the dancers' bodies as they move across the stage.

During the section when the dancers wear their looser garments, which only lasts for a few minutes, the choreographic structure seems to exhibit a more flowing character as well. The dancers appear to move with more ease in relation to each other, with an increased sense of speed, grace, and lightness. In some ways, this section appears reminiscent of the characteristic "ballet blanc" of romantic ballet, commonly portraying a supernatural setting of fairies in white costumes, aiming to create an illusion of defying gravity through their use of point work. When the group dance with the loosely flowing costumes ends, about five minutes before the end, a solo dancer in skin-tight costume replaces the group dancers wearing the loose costumes, introducing the last part of the work, in which all the dancers revert to the skin-tight leotards.

From my viewpoint, it is difficult to say if the movements in the section with the looser costume actually are more free and flowing than in the other passages, or if this impression for the most part is created because of the loose cut and the texture of the costumes. Interesting as it may be to find out whether my impression is due solely to the features of the costume, or whether there is an additional change in the movement qualities of the choreographic movement material, this is not my present task. A study intending to address the specific quantitative and qualitative changes and details of the costume/movement relationship would demand a set of very different methods to the ones I use in my approach, which largely is based on phenomenology and Bergsonian

intuition (1908). Such an alternative study could, for instance, be performed by means of a careful observation and analysis of the movement content in the particular section that includes the flowing garments. Some examples of analytical tools that might be applicable include Preston-Dunlop's (1981) notation system for manner of materialisation and choreutic units, Labanotation (Guest, 2004), as well as an analysis based on effort and effort-shape (Laban, 1947; Dell, 1993). The analytical results would then have to be compared with a similar analysis of the preceding and subsequent sections of the work, and linked to a discussion specifically addressing the characteristics of the costumes and how the costumes affect the perception of the movements. However, this particular kind of approach would not be conducive to my research aim, unless it were preceded by an understanding of how *BIPED* operates as a cybernetic performative, constituted by means of resonance, since the investigation outlined above is mainly situated at the level of the Sign operating as a representation, signifying objectified bodily movement.

The lighting was designed by Aaron Copp. For the most parts of the piece, the stage is lit by a bluish hue, seemingly lit from above the stage and dividing the stage into zones, or floor patterns, of blue light, white light, and an absence of light. There is also a presence, in various degrees, of white sidelights throughout the work. Most lighting cues are rather subtle, which attract my attention to how various body surfaces are exposed alternately by the white and the blue light. Occasionally, however, the lighting shifts quickly and and dramatically, radically altering the perception of the stage space in relation to the dancers, for instance by projecting distinctive square patterns on the stage which frames the dancers, or by illuminating the entire space with plenty of light, lending attention to the actual dancing bodies rather than the computer generated projections on the gauze, or by minimising the light, allowing the computer projections to appear as more dominant.

Gavin Bryars' music could for the most part be described as a sustained chord that gradually changes its harmony throughout the piece, both in terms of pitch and sound quality. In my perception of the piece, there is no given or obvious relationship between the music and the movements, which, if there were such a relationship, would have been highly atypical for Cunningham. While the ongoing chord has an almost continuous presence, there are on certain occasions a more melodic and rhythmic character to the music. Towards the end of *BIPED*, the music very discreetly fades away into silence.

The particular section that I will discuss below takes place chronologically just after the section with the loosely cut costumes, after approximately forty minutes of dancing and about five minutes before the end of the entire work. For the sake of visual assistance, I have included a DVD with a movie clip containing the movement sequence, entitled *Clip 1*, sourced from Atlas, Blum, and Cunningham's (2001) video documentary *Merce Cunningham: A Lifetime of Dance*.

III. Signs of a female dancer

The female dancer enters the stage from the darkness of the upstage backdrop at the moment just before all the dancers in the gauze-like costumes have disappeared. Throughout *BIPED*, many of the entrances and exits are made via the backdrop, which from my place in the auditorium appears as a dark, unlit surface, without any distinguishable texture or material. Hence, when a dancer makes their entrance from or exit through the backdrop, it seems to my perception as if someone suddenly becomes visible or invisible as they step in and out of the stage light. The actual entrance of the female dancer is not part of *Clip 1* (ibid.) on the included DVD, as the clip starts when the dancer is already fully visible.

In terms of movement, the female dancer moves forwards over the stage, towards the auditorium, by means of small, oscillating shifts of her weight, quickly and rhythmically shifting her support from one leg to the other. Both legs of the dancer are straight, working in what resembles a wide second position with the feet on demi-point. I get the impression that the dancer's feet are just lightly tapping the surface of the floor.

While the dancer's weight quickly oscillates from one leg to the other, the arms are moving with a very different quality, slowly shifting between certain spatial locations. When *Clip 1* starts, her right arm is in an upward gesture, slightly bent, and moving towards an extension on her right side, eventually reaching to the right with the arm at shoulder level. As soon as the right arm reaches a full extension to the right, it immediately moves on to what seems to be a stretch backwards and downwards. The precise angle of the arm in this downward extension to the back, which appears after about one second into *Clip 1*, is difficult to see on the video, as the arm is partly behind

the dancer's body, and thus partly out of the camera view.⁶ However, just as the arm moves through its full extension to the right side, and immediately continues towards the assumed down-backwards direction, the hand seems to flick open, from a slightly cupped posture of the hand, to a wide open palm. The flick of the hand, as the arm sweeps backwards-down, gives a slight impression of opening up the dancer's front to the space, and the movement of the hand contrasts with the overall movement of the arm in that the hand quickly accelerates for a short moment. The short burst of movement acceleration, the bending of the wrist, and its instant increase in energy flow are juxtaposed to the simultaneous exercise of control in the sustained movements of the arms and the continuous oscillations of leg support.

When the right arm reaches the angle where it seems to be pointing backwards-down, the dancer changes her focus. Up until this moment, the focus of the dancer was continuously directed towards stage left, in the same direction as her left arm. The change of focus coincides with the right arm reaching backwards-down, and the dancer's focus changes upwards, towards the stage ceiling, along a vertical axis passing through the centre of the dancer's body.

The left arm, which during the first three seconds of *Clip 1* has been held in a posture, reminiscent of the second position in classical ballet, slightly curved, starts to engage more actively as the dancer's focus changes to the vertical axis. Beginning as a ripple of the fingers, the left arm rotates to open up towards the ceiling, almost turning the

^{6.} The fact that the precise angle of the arm is not explicitly visible in the video recording could potentially give way to a discussion concerning the problems of using video for the purpose of movement description and analysis. However, this is not a concern in relation to this thesis for three reasons: First, an objectified movement analysis of the dancer is not part of the aims or objectives of my discussion; and secondly, even during a live performance, a viewer does not have access to all angles of a dancer at the same time. Hence, there will always be obscure angles where each particular viewer in an auditorium will not be able to fully see each particular limb and staged movement. Thirdly, from the perspective of the abstract or cybernetic performative, any mode of representation, whether that is a live performance, a video recording, a textual description, or a memory recollection, is equally problematic. Each mode of representation is also equally capable of generating a meta-subjective duration with its own unique and distinctive Signs and reverberating lived experiences. The fact that I am able to point out the obscurity of the angle of the arm of the dancer in my text could just as much be read as highlighting how a textual description could deliver additional detail in relation to a video recording, as much as it could be read as revealing how a video recording looses out on detail in relation to the perception of a live performance.

palm of the hand upwards, but with a flick of the left hand, similar in character to the previous flick of the right hand, the left palm turns downwards, and the left arm sweeps in a stretched-out gesture towards the front, in relation to the dancer's torso. The fingers of the left hand continue to ripple until the arm reaches out towards the front, parallel to the floor.

As the left arm reaches towards the front, the dancer's focus changes again, from being directed vertically upwards, the focus lowers for a moment to the right, and just as the left arm reaches forward, the focus joins the arm in being spatially directed forwards, again in relation to the dancer's upright torso. The action of focussing forward seems to trigger another action of the right arm, which immediately leaves its stretched-out backwards-down direction, and moves, with a slightly bent elbow, forward until it aligns in parallel to the left arm, both arms now reaching out forwards, approximately eight seconds into *Clip 1*.

Just before the right arm stretches out and aligns to the left arm, the focus changes once again. Slightly quicker than in the previous changes of focus, the focus first returns horizontally to the left, and then goes back up, vertically. When the focus has reversed back to the vertical axis, upwards, the right arm opens up with a sudden impulse, and moves towards the right side of the dancer, with the elbow slightly curved as it reaches the horizontal position. The focus changes again to the left, and then forward, the changes in focus being slightly more sustained than in the previous two.

Simultaneously with the last focus change, as the focus goes forwards, occurring about thirteen seconds into *Clip 1*, the left arm opens up and mirrors the right arm, reaching a horizontal second position of the arms. The change from a forward to a left direction of the left arm is of a very different temporal character to the right arm's change of alignment. The left arm starts with a very delicate softening of the left elbow, resulting in a slight bending of the left hand and arm, after which the left arm slowly opens up towards the left direction. When the left arm arrives at a horizontal alignment with the left side, so that the arms are held in a second position and the focus is forward, the dancer stops her oscillation of support between the left and right foot. Keeping her support on demi-point in a wide second position, the dancer stands and pauses in a moment of stillness.

(a) Interfaces and inter-subjectivity

In my above description of the female dancer, there are many different interfaces at work. For instance, there are the images presented to me as a screen representation of Atlas and Blum's (ibid.) video documentary, which provide me with source material for my viewing of *Clip 1*. In my production of the text, I have used additional interfaces, such as a keyboard and a computer screen. Moreover, the descriptive text itself serves as an interface towards the reader of this thesis. From the cybernetic performative perspective, those technological interfaces are mainly of interest to the extent that they operate as material representations of the Sign in the cybernetic performative. Hence, I will adopt the term "cybernetic performative interface" as a synonym for the Sign, emphasising the overlapping characteristics of Signs and conventional technological interfaces. Below, I will develop in more detail how different interfaces, conventional as well as of the cybernetic performative kind, interact and operate in relation to each other.

Starting with the screen on which I see images of the female dancer, the screen does in fact not represent to me a dancer from BIPED, rather what I see is a representation of a video recording of BIPED. Even more precisely, the images are not even a representation of a video recording, rather they represent the traces and final product of a process of manipulations and transformations that the video recording has been subjected to. Starting with the camera operators, Jacques Pamart and Paul Gibson, they had to make decisions regarding the framing and location of the camera, exposure, focus, and white balance. During the post-production process, Randi Snitz and Gaeton Le Martelot, the editors, not only decided which particular shots were to be included in the final product, but they also made aesthetic choices related to, for instance, colour grading, contrast, and the brightness levels of the images. In addition to, and partly as a result of, the aesthetic manipulation of the recording, the images were subject to radical changes as a series of recalculations of the encoded data which represented the recorded images. For example, from the first encoded data-stream representing the images recorded in the camera, a variety of different mathematical algorithms were employed during the post-production process, and eventually the images were reencoded to the MPEG-2 standard file format used on video DVDs. Each decision to manipulate and/or transform the data during post-production is linked to how a particular subject interfaces, in a cybernetic performative sense of the word, or resonates, with the Signs at work within the performance/recording/post-production process.

Even as the data was stored on a DVD, the process of mathematical transformations and recalculations, for the purpose of representation, did not end, but the data must once more be read and decoded in order to be presented as a screen image, on which I direct my gaze. Thus, the situation of me gazing at the images of *Clip 1* on the screen constitutes a complex and extended series of representations, transformations, interpretations, and manipulations, both by machines and by embodied human subjects, such as the camera operators, the editors, and in this case, me. The images I see on the screen constitute a highly complex abstraction with interfaces between many different kinds of processes. Apart from the conventional technological understanding of an interface between human sense-perception and encoded data, there is the additional duality of the Sign: subjective connotations of the perceived representations; and a reverberation triggering phenomenal performative series to reconstitute the subject on the level of embodied conventions. However, it is important to notice that the structural function of the Sign is identical both in my observation of the video representation, as well as during my live experience of the representation of BIPED on stage. From the cybernetic performative viewpoint, a movement perceived during a live performance is just as much an abstraction as is a video representation, or a textual description of the movement. The images that I see on the screen, and the live performance of the female dancer on stage, share the same basic features of the scratch-gesture of Merleau-Ponty's (1962) patient, Mr. Schneider: They all fail to represent the phenomenal body image of the performing subject, but instead, they all serve as nexus points of coupling between the performer and the observer.

At this point, it is possible to identify at least three principal categories of cybernetic performative interfaces at work in my study of the solo of the female dancer: The live performances that I have attended; the images that I see which represent a video

recording of the performance; and my previous textual description.⁷ It is important to note, however, that the textual representation is not simply a re-representation that combines the signifying value, or meaning, of the previous two. Instead, the text contains the representations of a cybernetic performativity which has become dynamically reconstituted through a coupling generated by means of resonance through the former two interfaces.

Each of the three above categories of cybernetic performative interfaces constitutes a unique point of coupling. In terms of their roles as Signs within the cybernetic performative, they all operate according to a similar structure, but they differ vastly in scale. Conventionally, a live performance is regarded as an authentic and original performance, and a video recording/representation, or a textual description, is regarded as a poor substitute. However, as a cybernetic performative, the situation is quite different. In the case of the live performance, the primary coupling was of an intersubjective character, linking the embodiment of the female dancer to myself. This particular coupling bears strong resemblance to Reynolds's (2007, p. 14) notion of kinaesthetic empathy, in the sense that there is an immediate experience that links the performance may be extended far beyond this initial definition. In any case, the second interface, in the form of the images on a screen representing a video recording of *BIPED*, constitutes a vastly more extended cybernetic performative reverberation, not only involving the two subjects of performer and perceiver, but also all the

^{7.} In my earlier textual description of the female dancer, I have not specified exactly which precise formulations and words that I have written as a response to my recollection of the live performances and my study of the video clips. While such a distinction may have a certain analytical value, it would rather detract from my overall aim, related to an intuitive understanding of how the various interfaces generates a non-causal reverberation which relates to the virtual as a totality. An analysis of how my textual description of the dancer may be stratified in terms of memory recollections and observations of video clips would, phenomenologically speaking, only serve to illuminate the realm of intellectualised subjective actuality, not the realm of the virtual. As I will explain later in this chapter, the meta-subject may be approached both from a macroscopic perspective and from an intuitive perspective, the former emphasising how perception consists of a distribution of the actual in degrees of time and space, and the latter, which is the main focus of my discussion, identifying how perception is a composite differing in kind between the virtual and the actual.

embodied subjects that have participated in the production and post-production of the video material.

Finally, the third nexus, in the form of my textual representation, provides the most complex and large-scale cybernetic performative construct, as it synthesises the reverberations of the previous two interfaces. Additionally, the textual performatively constitutes the reader of that text as an embodied part of the cybernetic performative, as far as the reader interprets the text as a representation of an embodied human subject, a dancer, who is gendered and performing particular movements of her arms, legs, and changes of focus. The actual understanding of the movements, the gender identity, and the subjectivity of that dancer is not communicated or represented in the text, but it is a large-scale, multi-subjective reverberation which triggers the phenomenal performative series in the reader to establish his or her particular embodied conventions about subjective embodiment, which generates a potential for a connotative reading of the text.

The above examples of cybernetic performative interfaces exemplify how the cybernetic performative perspective has the ability to constitute a subjectivity that extends beyond what I would like to call the "conventional subject", which normally would be perceived as a form of existence corresponding to an individual human being: a cultured, gendered, and otherwise conventionally defined citizen, corresponding to a singular material body and belonging to a certain society. I will also refer to the extended mode of cybernetic performative subjectivity as the "meta-subject". Through the nexus points of the cybernetic performative interface, a multiplicity of conventional subjectivities are brought into reverberation with each other. The tracing of this synthetic multiplicity corresponds to an extension of the consciousness of the metasubject and generates a macroscopic perspective of the cybernetic performative constitution. However, in accordance with Cassirer's (1953, p. 46) suggestion that reality never allows itself to be approached directly, the synthetic performative reverberation is hidden, and always takes the explicit form of a symbolic representation, the Sign. An effort to trace and comprehensively analyse the entire expanse of the unconscious reverberation through the Sign would grow exponentially in scale and ultimately prove to be impossible.

In spite of the impossibility of tracing the entire expanse of the unconscious, a partial mapping would still prove beneficial. The reverberating phenomenal realm may be hidden behind the representational aspect of the Sign, but a conscious identification of where the cybernetic performative interfaces are located will still reveal the location of the hiding places of that which is invisible. Hence, I will continue by means of performing a limited macroscopic mapping of the *BIPED*-me meta-subject. The mapping will be based on my perception of a section from *BIPED* corresponding to *Clip 2* (Atlas et al., 2001) on the attached DVD. This particular section contains a representation of motion captured material, in the form of dancing humanoid figures, in juxtaposition to an actual human dancer. I will start by giving some basic information about Cunningham's application of motion capture.

IV. A macroscopic perspective on cybernetic performativity

Clip 3 (ibid.) on the attached DVD contains an extract which gives a visual representation of how motion capture technology was used in the production of BIPED. The motion capture process utilised by Cunningham requires a specially designated space, surrounded by motion capture sensors, each sensor capable of reading movement in two spatial dimensions. As a dancer moves around in the designated space, the movements, not the visual image, of the dancer are recorded and encoded by a computer connected to the sensors. The sensors in the system used by Cunningham do not read the movements directly from the dancer's bodies, but instead, the sensors read a representation of the dancer's movements based on certain reflectors which are attached to the dancer's body. Hence, the data is an approximation of the dancer's movements, based on the distribution of the reflectors on the dancer's body. Once the data from the sensors was fed into a computer, it became subjected to further manipulation by the visual artists Kaiser and Eshkar. Eventually, the manipulated and transformed data became graphically represented in the live performances of BIPED as images, projected on a gauze situated in front of the stage. The computerised process of encoding human movements enables a wide range of graphical possibilities, as Cunningham points out just towards the end of *Clip 3*. In *BIPED*, the motion capture data is applied to graphical representations of abstract white dots, lines, as well as more complex geometrical forms, sometimes reminiscent of the shape of human bodies. A representation of motion capture data in humanoid form may be seen in Clip 2 on the attached DVD (ibid.).

(a) Dancing humanoids

The light projections of the computer generated figures that are visible in *Clip 2* appear about 23 seconds into the video sequence. In this particular section of *BIPED*, the figures have humanoid shapes, and their movements, as I will describe below, are typically Cunninghamesque. The moment just before the arrival of the humanoids, a female dancer, the only dancer on the stage, is walking backwards. The dancer steps on to her right leg, which is bent and in a turned out position, and tilts forward as she makes the step, spreading her arms into a balletic second position. Since the dancer is tilting forward, her chest is towards the floor, and her arms and palms are likewise curved towards the floor. Her straight left leg, leaving its position of contact with the floor in front of the dancer, sweeps around in the air in a large, peripheral, circular movement, eventually arriving at an arabesque-like position. Holding this position, the dancer turns 360 degrees around on her vertical axis.

Not until the dancer approaches a full 360-degree turn does her focus lift a little bit upwards, and the back straightens out from its forward tilt. Accompanied by the change of her back posture, the dancer's focus continues upwards, eventually becoming frontal, but with a slight head tilt towards the dancer's left side. As the dancer raises her torso, her chest becomes projected parallel to the downstage right diagonal, in terms of stage geometry, and her arms approaches, almost but not quite, a balletic first position.

The humanoids appear on the gauze as two large figures while the female dancer performs the 360-degree turn. The humanoids repeat the same movement sequence four times before they disappear. The humanoids' movement sequence is not identical to any of the movement sequences performed by the female dancer, but the movements of the humanoids have certain qualities and forms that to my perception are reminiscent of the movements of the female dancer. The fact that I see a certain coherence between the female dancer and the humanoids may be explained in different ways. It could be argued that the relationships that I see are purely by chance, and it is only in my perception that they achieve a resemblance (Cunningham, 1970, p. 42). On the other hand, the resemblance could also be related to the idea that Cunningham has developed a certain technique with a limited and predetermined movement gamut (Banes, 1994, p. 103). However, the reminiscence that I am addressing here is not limited to, or primarily constituted by, formal and qualitative features. Rather, my discussion aims to

identify how the Sign serves a double role as a representation and as a coupling interface within the cybernetic performative.

The very first movement of the humanoids is a clockwise turn. The legs of the humanoids - or rather, my reading of a representation of legs on behalf of the humanoids - are almost straight, but with a certain softness in the knees. The upper body is vertical, and the arms are held in a wide position, horizontally stretching out towards the sides, with slightly bent elbows, curving downwards. The posture of the humanoids' arms is very similar to the posture of the female dancer's arms at the moment of the humanoids' appearance, but with one crucial difference. While the humanoids' torsos are held vertical, the female dancer's torso is tilted forward. Since the female dancer has a slightly curved, frontal shape to her arms, like a balletic second position, and her upper body front is tilted forward and down, the female dancer's arms are embracing the space between her chest and the stage floor. The arms of the humanoids are also embracing the space towards the stage floor, which means that there is a similar spatial relationship between the stage floor and the arms of the female dancer and the humanoids. However, the relationship between the arms of the female dancer and the stage floor express a different set of embodied relationships than the humanoids' carriage of their arms. The arms of the humanoids are curving downwards in relation to their upright, vertical torsos, but the arms of the female dancer are curving forwards in relation to her torso, and it is because of her upper body tilting forwards that her arms embrace the space towards the stage floor.

Turning my attention to the use of support by the dancer and the humanoids, the first forward tilt of the female dancer is executed with straight legs, contrasting to the softness of the knees expressed by the humanoids. The tilt of the dancer is followed by a sharp, sideways throw of the right leg, similar to a balletic jete, and performed as the dancer returns to a vertical position with her torso. During the female dancer's second forward tilt, she keeps her legs straight and her right foot is sharply pointed as her right leg does a jete in a backwards-right direction. The second forward tilt of the dancer is immediately followed by a tilt to the left, which is accompanied by a simultaneous change of support. The right leg slides out to a narrow second position, still keeping both legs straight. The dancer's support is then completely shifted to the right leg, and she turns about 45 degrees to her left. While the dancer turns, her left leg is held in a fixed spatial position in relation to the stage floor, to the effect that when the quarter turn is finished, the left leg is in front of the dancer.

Facing in a diagonal downstage left direction, the female dancer proceeds with a second tilt to the left, and during this tilt, her support changes again. The previously straight legs with their sharp extensions are replaced by a softness in the knees, and the dancer gathers her left foot almost to a balletic fifth position, left foot in front of the right. In her new position, keeping the softness in her knees as a slight plie, the dancer makes a third tilt to the left, turning around approximately 90 degrees towards her right side. During the turn, her right foot is being picked up, approaching a cou-de-pied, and as the 90-degree turn finishes, the dancer's right foot is again being put down in front of the left foot, in a turned out position.

The left leg is kept with a softness in the knee throughout the 90-degree turn. Immediately after having returned to a vertical posture with her torso from the third tilt to the left, the dancer tilts backwards, so that her focus turns vertically upwards, and from the slight plie that she is holding, she extends her left leg towards her back and takes a large step backwards. While stepping backwards onto her left leg, the dancer briefly changes support to a straight leg, holding the right leg in a straight, pointed position towards her front. In this position, the dancer tilts for a fourth time towards her left side, and as she returns to a vertical posture, her knees once again soften, and the right foot is being pulled towards the left foot, approaching a position somewhere in between a fifth and a fourth, with her feet turned out.

Initiating a fifth tilt towards the left, the dancer turns her body about 45 degrees to the left, so that she faces straight towards the downstage direction. Her left leg is stepping in front of the right leg, but still keeping the softness of then knees in a slight plie. As the left leg is put down on the floor, the dancer changes her tilt, from a left tilt to a front tilt, without returning to a vertical position in between. In fact, the front tilt is so deep towards the dancer's front that it might better be described as a deep bending forward of the entire torso, rather than just tilting. As the dancer bends forward, the knees also bends further, approaching the position of a demi-plie.

I have concentrated mainly on the description of support, turns, and upper torso tilts performed by the female dancer in *Clip 2*. In terms of arm carriage, the female dancer

moves in very complex and detailed sequences, while the humanoids keep their arms rather simple and static, almost consistently carrying their arms with slightly bent elbows, most of the time curved down towards the stage floor. The only significant variation that I perceive in terms of the humanoids' carriage of their arms is that they use their right arm at the beginning of each of their turning sequences, slightly flexing it towards their body in order to initiate the turn, as if they were generating a momentum to spin around. The female dancer, on the other hand, does move her arms in and out of a position that strongly resembles the arm carriage of the humanoids.

When the two humanoids first arrive, their arms are held in a wide, almost horizontal position, but with elbows curved so that the forearms are downwards and slightly frontal. The humanoids turn clockwise, always keeping their knees soft, and as they complete their turn, they step backwards with their right leg out of the turn. As the humanoids step backwards, they also tilt their torsos forward. In this forward tilting position, the humanoids take three steps backwards, keeping their knees softly bending. After the third step backwards, the humanoids return to a more vertical position with their torsos, and as their torso change, their support also changes from their right to their left leg. The knees straighten up for a short moment, but not quite to the point where the legs are completely straight. The right arm sweeps in a continuous curve in front of the body, first downwards and then to the front, and finally it sweeps back towards the horizontal position. In terms of balletic vocabulary, the humanoid's right arm approximately passes through the bras bas, first, and second positions. Each sweeping movement of the right arm of the humanoid initiates approximately two full turns, and the turning and subsequent backward stepping sequence is repeated four times. While the humanoids perform their, as it seems, circular motion, the pathway of the female dancer is linear, following a diagonal from a central downstage position towards the upstage left corner.

(b) Attraction and the principle of the similar

Based on my above description of the female dancer and the humanoids, arguably it seems as if there are more differences than similarities between them. In fact, since the above description does not contain even one instance when the dancer and the humanoids share a similar movement, a posture, or a spatial pathway, my textual representation of the dancer and the humanoids could indeed be read as a list of differences. However, and this is a crucial point, the perception of difference concerns the Sign in its role as representation, not its role as a nexus point of reverberation. For

instance, when I compare how the dancer and the humanoids embrace the space between their arms and the stage floor, as a set of differences in the posture of their torsos and the angles of their arms in relation to the torsos, the very reason why I can make such a comparison at all lies precisely in the coupling that makes me reverberate with the dancer and the humanoids. Every kind of difference and similarity that I may identify on the level of representation is ultimately dependent on the reverberating phenomenal performative series that provides embodied meaning to the notion of a torso, arms, and the various postures that the arms may hold in relation to the torso.

The highly abstract characteristics of the humanoids serve to exemplify the dual role of the performative Sign, as interface and representation: Two-dimensional screen representations of binary strings of data, tracing their origin through algorithmic manipulations of a past reading of an approximate spatial representation of a dancer's embodied movements, which in themselves are performative representations of an objective body image. The dancer's movements, in turn, are representations of a creative process involving the dancer and Merce Cunningham, united as a cybernetic performative in a resonance triggered through the progressive accumulation of Signs: moving bodies, discussions, touches, gazes, even more movement, modifications of movement. All the activity taking place during the dance rehearsals which led up to the creation of *BIPED*.

The division of the Sign into a representation and a nexus for reverberation could also be seen as pointing towards a stratification of two different modes of perception. The representational function of the Sign corresponds to a process of analytical and intellectual reflection, whereas the Sign as a cybernetic performative interface corresponds to an unreflective, experiential existence. From a phenomenological perspective, the analytical stance may be conceptualised as a highly objectified state of being, and the unreflective state may be understood as having a closer affinity to the phenomenal field, in line with the objective and phenomenal body images. In my subsequent discussion, however, I will partly aim to replace the notions of the objective and the phenomenal with a theory of the virtual, based on Bergson (1908) and Deleuze (1994).

In *Matter and Memory*, Bergson (1908) discusses the relationship between memory and the process of intellectual reflection. One of Bergson's fundamental ideas is that

memory and perception, as well as space and time, are very closely related. In fact, the differences that we perceive, according to Bergson, lies precisely in our capacity for analytical reflection. Thus, analysis and reflection generate representations of difference between memory, perception, space and time, all derived from an original wholeness of being, extending beyond the boundaries of an embodied subject and conscious perception. Bergson's line of thought represents a movement from a subjective identification of the similar towards an analytical representation of difference, as opposed to the process of synthesising parts into a wholeness of experience through reflection. Thus, it is through an effort of reflection that we extract time and space, together with all other distinguishable quantities and qualities, as representations. Bergson compares this theory of human perception to the basic utilitarian functions of plants, and even dead matter, completely void of any kind of self-consciousness in the conventional sense of the word:

"Hydrochloric acid always acts in the same way upon carbonate of lime whether in the form of marble or of chalk yet we do not say that the acid perceives in the various species the characteristic features of the genus. Now there is no essential difference between the process by which this acid picks out from the salt its base and the act of the plant which invariably extracts from the most diverse soils those elements that serve to nourish it. Make one more step; imagine a rudimentary consciousness such as that of an amoeba in a drop of water: it will be sensible of the resemblance, and not of the difference, in the various organic substances which it can assimilate. In short, we can follow from the mineral to the plant, from the plant to the simplest conscious beings, from the animal to man, the progress of the operation by which things and beings seize from their surroundings that which attracts them, that which interests them practically, without needing any effort of abstraction" (ibid., p. 159).

The above quote from Bergson illustrates the principle of how non-conscious lifeforms, as well as dead matter, operates according to a principle of similarity. Every kind of difference of being is founded in a spontaneous assimilation of the similar, or the corresponding, just as my previous comparison between the female dancer and the humanoids, while revealing representations of difference, was based on a non-reflective and fundamental seizure, or attraction, of the similar. Bergson's model outlines how it is possible to conceptualise a cybernetic performative mode of being that not only is inter-subjective, but also, as the case of my assimilation of the humanoids shows, stretches across the conventional boundaries separating culture and nature, human and

machine, the directly experienced and the abstract, and additionally, the actual and the virtual. By means of representing differences between the dancer and the humanoids, I have in fact entered into a state of resonance with them, extending my performative cybernetic construct to what I will refer to as a "meta-subject".

The state of reverberation in the cybernetic performative meta subject could be explained by means of Bergson's notion of a basic utilitarian capacity of perception to non-reflectively extract that which attracts, based on the principle of the similar. Likewise, the capacity of the cybernetic performative interface to trigger reverberation is sourced from this rudimentary affirmation of sameness, taking place prior to any reflection or differentiating analysis. Still, however, the meta-subject is a hybrid being, as it cannot escape its ontological grounding through the Sign. The origin of the cybernetic performative being is impure, and it is only through an inherently abstract representation that the meta-subject may enter into existence as a reverberation, as for instance in the case of the humanoids in *Clip 2*.

(c) The temporal illusion of subjective constitution

In Bergson's (ibid.) understanding of consciousness and subjectivity, perception is intimately connected to representations of space and time. Indeed, he defines memory as the capacity of consciousness to situate itself outside the presence of the body, establishing a non-conventional embodiment of the temporal and the spatial. Analysing the representations that are part of the meta-subject performatively constituted in the reverberation between myself and BIPED, my notion of time and space are indeed affected on the level of phenomenal performativity. With the appearance of the humanoids in Clip 2, the data represented on the screen could also be described as a present representation of a codified past. Thus, my reverberation with the humanoids not only constitutes a coupling between me and another embodied subject, but it does so through an engulfment, or a collapse, of the representation of temporal difference between the point in time of encoding movement by means of motion capture, and the point in time of projecting the humanoids on the screen that I am watching in the theatre. In the representation of the humanoids, the past and present fold into each other, giving the meta-subject a revised notion of the concept of memory, recollection, and perception. Since the meta-subject consists of a non-causal reverberation that causes a collapse of representations of temporal difference, the notions of memories of a past and perceptions of a present cannot be defined in terms of something that was, but is no more, and something that is, but will become something that was. Time, as a

representation of past, present, and future, has to be redefined in relation to the metasubject.

Bergson gives some suggestions in relation to a revised notion of temporality, memory, and perception. In his "theory of memory" (ibid., p. 235), Bergson states that memory "*is something other than a function of the brain, and there is not merely a difference of degree, but of kind, between perception and recollection*" (ibid., p. 236) [italics in original]. To Bergson, memory as a recollection does not reside as a function inside the brain, like data stored on a disc, or papers filed in a cabinet. Neither is Bergson's recollection something that is created or generated in the present by the mind of a subject. Bergson explains his alternative view of memory, embodiment and time in the following way:

"The truth is that memory does not consist in a regression from the present to the past, but, on the contrary, in a progression from the past to the present. It is in the past that we place ourselves at a stroke. We start form a 'virtual state' which we lead onwards, step-by-step, through a series of different *planes of consciousness*, up to the goal where it is materialized in an actual perception; that is to say, up to the point where it becomes a present, active state - up to that extreme plane of our consciousness against which our body stands out. In this virtual state, pure memory consists" (ibid., pp. 239-240) [italics in original].

In Bergson's conceptual world, memory is related to the idea of a virtual state, which is a situation of relative duration into which a subject has the capability to insert itself. There is also in Bergson's recollection a movement from the past to the present, but the past also coexists with the present, as the subject is able to put itself there "at a stroke". However, in spite of the coexistence of past and present, there is, paradoxically, a progressive step-by-step journey, passing through different planes of consciousness, until the journey reaches back to the present, as a embodied consciousness.

Bergson's idea of a step-by-step journey through various planes of consciousness, with the goal of materialising an actual perception of the body as a discrete mode of being, could be compared to my tracing of the phenomenological performative series. Just as Bergson's journey is described as proceeding step by step, I have identified a process which gradually synthesises the various facets of objectified subjective embodiment from the phenomenal field. The problem with those descriptions is that both the gradual process and the step-by-step journey happen immediately and non-causally, in the form of a reverberation. The journey is immediate: "at a stroke" I am placed in the past, while simultaneously remaining in the present. While the coexistence of a gradual progression and a non-causal and immediate reverberation may seem paradoxical, the paradox only exists as a side effect of the dual nature of the performative Sign with its accompanying reflective and non-reflective modes of perception. The reflective mode of perception may gain access to the non-reflective, but only at the price of a causative distortion of the non-reflective state. The relationship between the two states of being could be illustrated through Merleau-Ponty's (1962, p. 30) notion of attention and its dependence on a certain "transition-synthesis".

(d) Causative distortion

According to Merleau-Ponty (ibid.), the transition-synthesis is an effect that appears in relation to a primary and secondary act of attention. The primary act consists of a change in the structure of consciousness, a setting forth of a new dimension of consciousness as an *a priori*, and the secondary is a creative act of objectification which is based on the structure set out in the first act of attention. Merleau-Ponty explains the two acts of attention through the example of how a child acquires the ability to see and identify colours: According to psychologists, an infant's ability to see colour has been understood as a gradual development, from the capacity to distinguish between the coloured and the colourless, via a period when an infant may perceive colour as having warmer or colder shades, to a final state where the infant is able to precisely identify each colour. However, Merleau-Ponty highlights one weakness in this explanation: "The child must, it was alleged, see green *where it is*; all he was failing to do was to pay attention and apprehend his own phenomena" (ibid., p. 30).

In Merleau-Ponty's view, the failure in relation to the infant as yet unable to distinguish colours was that of the the psychologists, as they "were not yet able to conceive a world in which colours were indeterminate, or a colour which was not a precise quality" (ibid.). Instead, Merleau-Ponty describes the ability to distinguish between precise colour qualities as a genuine creation of secondary attention, which only may be enacted once the first act of attention has prepared the structure of consciousness as a set of horizons. Once the second act of attention has been achieved, all the data gathered in the previous steps appear as a preparation that, step by step, appears to lead up towards, for instance, the ability to distinguish colours through objectified sense-perception. It is precisely the overthrowing of data following the second act of attention

that constitutes the transition-synthesis, when the instantaneous creation of the secondary act of attention appears as a gradual and accumulative process. Merleau-Ponty emphasises the instantaneity and radical character of the secondary attentional process as a simultaneous act of creation and destruction:

"The miracle of consciousness consists in its bringing to light, through attention, phenomena which re-establish the unity of the object in a new dimension at the very moment when they destroy it. Thus attention is neither an association of images, nor the return to itself of thought already in control of its objects, but the active constitution of a new object which makes explicit and articulate what was until then presented as no more than an indeterminate horizon. At the same time as it sets attention in motion, the object is at every moment recaptured and placed once more in a state of dependence on it" (ibid.).

There are partial overlaps between the overthrowing of data in Merleau-Ponty's transition-synthesis and the way in which the performative Sign appears as a representation. As soon as the non-causal reverberation is triggered by the nexus, the Sign at once appears as a representation, as it is recaptured by a subjective act of attention and placed in a state of dependence on the subject, in the form of a symbol available for interpretation. In the recapturing of the performative Sign as a symbol, the cybernetic performative reverberation appears as an accumulative and causative process, where the phenomenal performative series synthesise as the various facets of a gradually acquired objective body image, or in Bergson's terms, as a step-by-step journey through series of different planes of consciousness.

From the perspective of the cybernetic performative, Bergson's notion of memory and Merleau-Ponty's concept of transition-synthesis could be understood in the following sense: As I gaze at the humanoids in *BIPED*, I at once locate myself as a reverberating meta-subject at a past/present juncture. Simultaneously, the nexus point of my reverberation is immediately reformulated as a symbolic representation of a codified past embodiment of a dancer, which through an accumulative series of events and acts - such as the process of motion capture, the creative acts of graphic design and manipulation of the captured data, and the projection of the data onto a screen in the theatre as moving images - appears to me as an object open to interpretation.

An awareness of how transition-synthesis operates in relation to the establishment of objects gives an understanding of how temporality contracts or expands, depending on

whether I approach it from the perspective of the cybernetic performative, or from the perspective of objective analysis. For instance, as I look at the video recording of *Clip* 2, there are at least three different levels of analytical temporality which may be expanded: First, a present moment during which I am gazing at the screen on which the images are projected; secondly, a past when the dance was performed live by the female dancer in relation to the humanoids; and thirdly, another past, corresponding to the motion capture session during which a dancer's movements were captured. Yet, as I watch *Clip* 2, at a stroke, I contract all the above temporalities in a meta-subjective juncture. As a cybernetic performative, my subjectivity becomes reconstituted, and my present time, as it were, stretches out in a vast expanse of temporal duration.

In *The Creative Mind*, Bergson (1946) argues that every human being has the capacity to expand their sense of temporality, beyond an immediate present, towards a duration of flexible length:

"Let us on the contrary grasp ourselves afresh as we are, in a present which is thick, and furthermore, elastic, which we can stretch indefinitely backward by pushing the screen which masks us from ourselves farther and farther away; let us grasp afresh the external world as it really is, not superficially, in the present, but in depth, with the immediate past crowding upon it and imprinting upon it its impetus; let us in a word become accustomed to see all things *sub specie durationis*" (ibid., p. 152) [italics in original].

One difference between Bergson's account of a *sub specie durationis* and the duration of a performatively constituted meta-subject is that the cybernetic performative not only contracts an immediate past into a present, but it has the capacity to contract multiple and fragmented pasts, analytically speaking. My gazing at *Clip 2* represents one example of such a fragmented contraction, as the temporality of me/*BIPED* as a meta-subject could not, after having been subjected to a transition-synthesis, be argued to constitute an analytical continuity of pasts that seamlessly leads towards a present. Instead, there is a representation of temporal difference, in the sense that the motion capture, performance, and observation happened at three distinctively different occasions.

The above discussion of the dancer and the humanoids in Clip 2 has demonstrated how the cybernetic performative may look from a macroscopic perspective, as a construct encompassing several conventional subjects, such as audience, performer, and creator, as well as conventional technological entities, for instance computers, cameras, binary data, and mathematical algorithms. Through my comparison of the cybernetic performative to Merleau-Ponty's transition-synthesis and Bergson's theory of time and duration, it has become increasingly apparent that a conventional analytical perspective is not enough in order to fully investigate the constitutional functions of the cybernetic performative. An analytical approach serves well to explain the representational and symbolic function of the cybernetic performative interface, or the Sign. Analysis also makes it possible to clearly define the objective existence and distribution in space and time of all the various elements that are synthesised into the cybernetic performative. However, the analysis would only manage to outline the cybernetic performative on the level of that which is signified and represented, as the phenomenal and reverberating aspects of the cybernetic performative would hide behind, or underneath the surface of that which is objectified. Hence, the analytical approach must be complemented with a method that uncovers the characteristics of the other side of the Sign, the realm of the non-causal reverberation. This is the area I will discuss in the following section, starting with a more in-depth look at memory, perception, duration, and temporality, based on Bergson's (ibid., p. 190) concept of "intuition".

V. Intuition and the cybernetic performative

The above macroscopic perspective was characterised by a reading and identification of various modules and parts of the cybernetic performative. Using this method, it is possible to build up, step by step, an analytical understanding of how the system would performatively constitute and reconstitute itself, as a complex system of parts, stretching through time, space, and phenomenological layers of consciousness. Bergson presents an alternative approach that stands in an antithetical relationship to intellectual analysis, which is the method of intuition, generating not a knowledge about representation, but something that Bergson (ibid.) calls "absolute" knowledge. Bergson favours the intuitive approach to the analytical, since he deems analysis unsatisfactory in that it only leads to yet more analysis. Moreover, Bergson describes analysis as lacking the power to address that which it aims to address directly, but instead, analysis avoids that which it tries to express:

"It follows that an absolute can only be given in an *intuition*, while all the rest has to do with *analysis*. We call intuition here the *sympathy* by which one is transported into the interior of an object in order to coincide with what there is unique and

consequently inexpressible in it. Analysis, on the contrary, is the operation which reduces the object to elements already known, that is, common to that object and to others. Analyzing then consists in expressing a thing in terms of what is not it. All analysis is thus a translation, a development into symbols, a representation taken from successive points of view from which are noted a corresponding number of contacts between the new object under consideration and others believed to be already known. In its eternally unsatisfied desire to embrace the object around which it is condemned to turn, analysis multiplies endlessly the points of view in order to complete the ever incomplete representation, varies interminably the symbols with the hope of perfecting the always imperfect translation. It is analysis ad infinitum. But intuition, if it is possible, is a simple act" (ibid., pp. 190-191) [italics in original].

Bergson's mistrust of analysis and the role of the symbol may seem to stand in a contradictory relationship to my previous discussion on Cassirer's (1953) interpretation of the role of the symbol. However, a closer reading of Cassirer can reveal that he does not, strictly speaking, oppose Bergson's intuition. Rather, Cassirer, points to the difficulty in separating life and form, the real and the visible (ibid., p. 39), and proclaims that "everything is connected with everything else by invisible threads" (ibid., p. 72). Hence, even the symbolic and the intuitive are connected, and one cannot be approached as a pure entity without the involvement of the other. In fact, Cassirer proposes the existence of two complementary kinds of realities, which to some extent corresponds to Bergson's distinction between the intuitive and the analytical. In Cassirer's (ibid., p. 85) philosophy, the world exists either as a totality of possible expressive experiences, or as the concept of the thing and of causality.

Bergson (1946, p. 191) does indeed acknowledge the difficulty in the intuitive act, questioning "if it is possible". On the other hand, if it is at all possible, Bergson ascribes a vast potential to the practice of intuition. Deleuze (2002, p. 14) describes Bergsonian intuition as a highly developed and sophisticated method, as precise and "as capable of being prolonged and transmitted as science itself is". While Bergson (1946, p. 191) describes intuition as a "simple" act, Deleuze (2002, p. 14) explains that in Bergson's thought, simplicity does not exclude "a plurality of meanings and irreducible multiple aspects".

The question relevant to my present discussion is: What does the intuitive "interior" (Bergson, 1946, p. 190) of a cybernetic performative constitution look like, and what

kind of absolute knowledge is there to find? In Deleuze's (2002, p. 35) reading of Bergson, intuition as a method consists of three principal rules: "problematizing", "differentiating", and "temporalizing". The first rule involves a testing of the problem itself as regards its capacity to generate an adequate answer. Many questions, Deleuze suggests, contain badly analysed composites, which, when solved, will give illusive answers. One example of a bad composite highlighted by Deleuze (ibid., p. 18) is the question "Why is there this rather than that (when that was equally possible)?" Deleuze identifies in the question the false composite of posing the possible as existing before existence, "instead of grasping each existence in its novelty, the whole of existence is related to a preformed element, from which everything is supposed to emerge by simple 'realisation'" (ibid., p. 20).

Under the rule of differentiation, Deleuze poses intuition as "a method of division" (ibid., p. 22). While Deleuze points out that Bergson is acutely aware of the fact that in reality, everything is mixed, and experience only offers composites, the purpose of intuitive division is to divide that which differs in *kind*, and which through representational practices often appears to be a difference in *degree* (ibid., p. 23). The third rule is in itself a division of space and time, stating that problems should be stated and solved "in terms of time rather than of space" (ibid., p. 31), hence, Bergson's (1908) stress on the concept of duration, which is defined in terms of the temporal.

In order to understand the structure of the interior, non-causal reverberation of the meta-subject, I will investigate the cybernetic performative based on Deleuze's (2002) identification of the three above principles characterising Bergson's method of intuition. The aim of this intuitive reading is to obtain an additional perspective, complementing the previously expanded external macroscopic view, which produced a definition of the meta-subject as the synthesised sum of its objectified parts, distributed in time and space.

(a) The cone of temporal experience

In Bergson's view, the perception of a present moment is related to three processes, appearing to the subjective experience as a composite: "pure memory, memory-image and perception, of which none of them in fact, occurs apart from the others" (1908, p. 133). Both pure memory and absolute perception only exist for Bergson as unattainable utopian ideals, as pure memory always is in a process of materialisation towards an embodied present, and the sense-perception of the body merges with the slightly

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materialised memory-images, in a process of recollection, aimed towards efficiency of embodied action (ibid., p. 179).

Bergson (ibid., p. 152) explains the relationship between perception and pure memory by means of a cone, illustrated below in *Figure 5*. The cone is turned on its top, "S", which stands on the plane, "P", and the base of the cone has the diameter "AB". The plane P is represented as always moving and transforming, as it represents a subject's actual representation of the universe. S, the point of the cone that touches the plane P, corresponds to a sensory-motor mechanistic concentration of my body, in the form of physiological motor reactions responding to stimuli of the nervous system. Hence, the point S at all times represents the immediate present moment of pure experience as a subject. The base of the cone, AB, represents the totality of all my accumulated memory recollections, which are situated in the pure past and remains motionless.

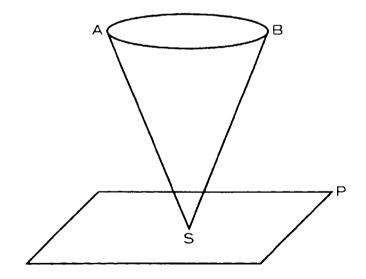


Figure 5: Bergson's cone (1908, p. 152).

One unconventional, but important feature of Bergson's cone is that the base AB exists outside of consciousness. From a conventional perspective, the existence of an accumulated memory outside of the subjective consciousness that actually performs the accumulation may seem problematic. However, Bergson argues that the same principle applies to the world of physical objects and their relationship to subjective senseperception. It is commonly assumed, Bergson suggests, that there is a world of objects beyond the images generated through subjective perception, and this implies an existence of matter as an unconscious state:

"Beyond the walls of your room, which you perceive at this moment, there are the adjoining rooms, then the rest of the house, finally the street and the town in which you live. It signifies little to which theory of matter you adhere; realist or idealist, you are evidently thinking, when you speak of the town, of the street, of the other rooms in the house, of so many perceptions absent from your consciousness and yet given outside of it. They are not created as your consciousness receives them; they existed, then, in some manner, and since, by hypothesis, your consciousness did not apprehend them, how could they exist in themselves unless in the unconscious state? How comes it then that an *existence outside of consciousness* appears clear to us in the case of objects, but obscure when we are speaking of the subject" (ibid., p. 142) [italics in original].

In the illustration of the upside down cone SAB, there is an existence outside of consciousness both in terms of the physical world of objects, represented by the entire area of plane P, apart from the very point of intersection with S. The unachievable and utopian base of the cone, AB, is in a similar manner situated outside the consciousness of the subject. However, the cone in *Figure 5* not only illustrates Bergson's distinctions between object and subject, matter and mind, and the conscious versus the unconscious. True to the third rule of intuition, Bergson's cone structures all of the above concepts in time, in the form of a division of kind between an immediate perception of the present, coinciding with the material world of objects, and a pure past, in the form of an unconscious realm of memory and recollection.

I would suggest that Bergson's cone may be applied to the perception, memory, and temporality of the constitution of the cybernetic performative *BIPED*-me meta-subject. The plane P and base AB differs between a conventional subject and a meta-subject in the sense that the unconscious realms of perception and memory of the meta-subject include the collective unconsciousness of everything that is triggered into reverberation

through cybernetic performative interfaces. In my earlier macroscopic analysis of the cybernetic performative, I discussed how my sense-perception of the humanoids brought me into reverberation with past embodiments, coinciding for instance with the motion capture process. However, one objection, relating to consciousness, could be raised in relation to the proposed meta-subjective reverberation between my conventional subjectivity and the dancer performing the movements that were motion captured.

For instance, a conventional subject may not be aware of the fact that the humanoids in Cunningham's *BIPED* are partially created by means of motion capture, or he/she may not have any knowledge about the relationship between motion capture technology and embodied movement. In those circumstances, how is it possible to prescribe that subject as a meta-subject, resonating with the past embodiment of the dancer involved in the motion capture process? After all, the subject in question has no conscious knowledge about any such coupling.

Bergson's notion of an existence outside of consciousness, both in terms of perception as well as memory, addresses the above question. Whether I am aware of how the motion capture process works or not, or to what extent the technology was used in BIPED, does not detract from the fact that my perception of the female dancer stands in an aesthetic relationship to my perception of the humanoids, and this particular mode of perception does indeed harmonise with Kaiser's idea of how BIPED successfully would be conceived: "in my mind the piece is successful if your perception of the dance has been affected by the projections even when they aren't present on the screen" (Kaiser, in Atlas et al., 2001, video on DVD, transcribed by Johan Stjernholm). As the images of the humanoids do affect my subjective perception of the female dancer's embodiment, as represented in Clip 2, the motion captured material does actively interfere with how the phenomenal performative series, which eventually constitute my objectified subjective embodiment, are effectively modulated. Thus, just as Kaiser's idea of a successful perception of BIPED is independent of any knowledge about motion capture, so is the establishment of a cybernetic performative coupling. Instead, the reverberation is part of the *unconscious* past of the meta-subject, which arrives to the present from the unattainable base AB of Bergson's cone (1908, p. 152).

Yet another example of the unconscious of the meta-subjectivity could be derived from looking back at the representation of my perception and analysis of the female dancer in Clip 1. In this case, the unconscious base of the cone AB would contain all the processes of embodiment and perception that have become fixed as a past: the movements of the dancer, the camera operators' interpretation of how to capture the movements, and all the creative modifications made to the original video footage throughout the post-production process. Additionally, the AB base of the cone would include the phenomenal performative series generated during the many rehearsals with Cunningham and the dancers in various dance studios and theatres. Situated in AB is the entire field of Cunningham's and all his collaborators' subjective processes in the process of making BIPED. But there is more: since BIPED represents many of the signature moves that characterise the Cunningham dance technique, AB contains the complex and diverse historical development that has participated in shaping Cunningham's embodied practices and choreographic legacy. Hence, the entire scope of the unconscious of BIPED-me as a meta-subject is exceedingly vast, and its reverberation extends over innumerable conventional and historical subjects.

The immense scope of the unconsciousness of the meta-subject may trigger the question of how it is at all possible for a conventional subject to gain conscious access to the entire AB base of the meta-subject? The answer to that question is intimately linked to Bergson's explanation of how perception and memory operate in living practice as a composite within the SAB cone. In fact, the entire expanse of AB is never at any given point in time accessible as a totality in the lived experience of a subjective consciousness. Instead, the insertion point S on the plane P and the recollections pulled from AB are always partial and incomplete. In living practice, the memory recollections and the perceptions of a subject, conventional as well as those of the meta-subject, will always operate as a composite somewhere in between S and AB. *Figure 6*, illustrates two instances of lived experience as A'B' and A"B", where A'B' signifies an experience characterised by a higher degree of sensory and motor presence, while A"B" signifies an experience where the subject is more occupied with memory recollection.

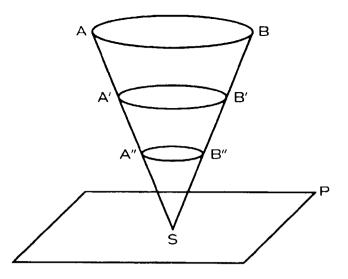


Figure 6: Instances of lived experience in Bergson's cone (1908, p. 162).

In Bergson's view, each particular instance of lived experience is a composite of a partial extraction of consciousness towards S and AB in various degrees. The guiding principle behind what is extracted from S and AB respectively, and to what degree, is dependent on the utilitarian character of the active embodiment represented by the subject:

"In point of fact, the normal self never stays in either of these extreme positions; it moves between them, adopts in turn the positions corresponding to the intermediate sections, or, in other words, gives to its representations just enough image and just enough idea for them to be able to lend useful aid to the present action" (ibid., p. 163).

It appears that Bergson applies the extreme positions of the cone to: in AB, a pure past of memory recollection; and in S, a state of perception in the absolute present, exclusively made up of motor reactions and sensory stimulation. The entire structure follows the second and the third rules of intuition, according to Deleuze's (2002) reading of Bergson, as it is a division of lived experience into a temporality of past/ memory and present/perception. In relation to the first rule, which states, "Apply the text of true and false to problems themselves" (ibid., p. 15), and which warns of "badly analyzed composites" (ibid., p. 17), Bergson's representation of lived human experience as a temporal cone of perception/memory corresponds to Deleuze's definition of an adequately stated and true intuitive problem. However, as 1 will demonstrate below, an intuitive division of the lived experience of a meta-subject, the *BIPED*-me, which is constituted through cybernetic performativity, differs in some crucial aspects from the intuitive division of a conventional subject.

(b) The cone of abstraction

I have so far observed and analysed three different kinds of objects representing instances of dance: Foster's (1998) text describing a female choreographer, my perception of live performances of *BIPED*, and video recordings of *BIPED* (Atlas et al., 2001, video on DVD). In terms of temporality and memory, and in relation to the practice of observation, the three objects differ vastly. The difference could be exemplified by pointing out the fact that at the time of my writing this text, the only way for me to access a live performance of *BIPED* is in the form of a memory recollection. However, the other two objects, Foster's text (1998) and the DVD containing video recordings of *BIPED* (Atlas et al., 2001, video on DVD), are immediately available for me to re-experience at my choice, as I wish, in addition to their existence for me as memory recollections. This distinction is most significant in relation to the method of intuition in relation to the meta-subject.

To illustrate, when I watch a screen representation of a video recording of *BIPED* (ibid.), the data that is encoded on my DVD does not cease to exist in the present. Neither does Foster's (1998) text disappear from having an existence as a present object during my reading of the text. On the other hand, the embodied movements that I see live in the theatre as a representation of *BIPED* do indeed cease to exist as objects with a spatial and temporal presence as soon as I have perceived them. The difference may seem mundane from an analytical perspective, but from the intuitive viewpoint, the difference poses a significant challenge to Bergson's temporal division of lived subjective experience.

The problem of temporality in relation to the meta-subject could be exemplified through the situation of me reading Foster's (ibid.) textual representation of the female choreographer. When I read the text the first time, and I enter into a coupling with the embodiment of both Foster and the female choreographer, my present experience as an embodied subject is situated somewhere in between the tip of the cone S and the base AB, for instance as A'B' as illustrated in *Figure 6*. However, as I read the text, the text-object refuses to pass towards AB as a memory, as it continues to have an existence in the plane P, which meets my state of absolute perception at S. Thus, when I have

finished reading the text, the text simultaneously occupies a position, and in fact coexists, both on the plane P and at the base of the cone, the pure past of AB. The second time I read the text, it occupies at least three places within the cone model, P, AB, as well as somewhere in between, for instance at A"B". The objective existence of the data on the DVD (Atlas et al., 2001), representing video recordings of *BIPED*, may also be understood in a similar manner.

On the other hand, turning my attention to the live performances of BIPED I experienced in the theatre: As the performance ends, BIPED does indeed cease to exist as a physical object in space and time, and becomes henceforth deposited in the realm of AB as a memory. Even though it may be argued that it is possible to go and see another performance of BIPED, this is only true as far as the dance company's touring schedule allows. BIPED can only exist as an object in P on certain specific occasions, depending on the seasonal programmes of the theatres that stage the work. Moreover, each time that I see BIPED live in the theatre, the object will, as a totality, be physically different, as the relationship between the embodied dancers and the representations of the encoded digital material will vary: while the entire piece is around 45 minutes long, "The sequences of animation vary from 10 seconds to 4 minutes, totaling 27 minutes; they run discontinuously through the performance" (Downie, Eshkar and Kaiser, 2009). Yet, as a live performance, BIPED does partially share some of the objective features I have identified in Foster's textual representation of the female dancer and the video representations of BIPED. The motion captured data represented as screen images of humanoids during the live performances of BIPED are characterised precisely by a permanent position, or objective existence, in P, as are Gallo's costumes, and the bodies of the individual dancers performing in BIPED.

The problem posed by the meta-subject in relation to Bergson's cone model is that in some respects, the meta-subject simultaneously coexists at S, AB, and at any level in between. Hence, the intuitive division of the experience of the meta-subject into a cone such as SAB is in fact no division at all. The question posed seems to exhibit a badly analysed composite, as the division fails to establish any difference in kind. The reason for this failure is that the cybernetic performative constitutes a different kind of temporality to the temporality of a conventional subject. Instead of experiencing an existence divided into a past, present, and future, the meta-subject experience concerns different levels of encoding, recoding, and transformation of symbols of representation, simultaneously reverberating across spatial and temporal divides because of the double nature of the cybernetic performative interfaces. Hence, in order to intuitively divide the experience of the meta-subject, the problem has to be stated not only in terms of the temporal, but also in terms of levels and kinds of abstraction in representation.

The realm of abstraction does not appear in isolation from space or time, but rather, both space, time, and abstraction are intimately connected to each other. While Deleuze (2002) emphasises the problem of confusing temporal and spatial issues for the purpose of Bergsonian intuition, Bergson (1908) additionally argues that an exaggeration of the differences between time and space is equally problematic, as it hides the similarity of the spatial and the temporal within the unconscious: "we have fallen into the habit of emphasizing the differences and, on the contrary, of slurring over the resemblances, between the series of *objects* simultaneously set out in space and that of *states* successively developed in time" (ibid., p. 145) [italics in original]. In Bergson's unconscious, space and that the conscious "can only materialize those of our former perceptions which can ally themselves with the present perception to take a share in the final decision" (ibid., p. 146). Hence, space appears to the action-inclined consciousness in the form of continuous distance, whereas memory seems to jump in discontinuous intervals of time.

In the unconscious of the meta-subjective, abstraction coexists with time and space, all intertwined by the principle of the similar into a synthetic manifold. However, as the conscious, with a desire towards action, grabs hold of the manifold, vision appears as perceptions of objects separated by continuous distances, memory as instances separated by temporal intervals, and abstraction as symbolic practices of representation. Bergson explains the process of how consciousness manifests time and space differently in the following way:

"actual consciousness accepts at each moment the useful and rejects in the same breath the superfluous. Ever bent upon action, it can only materialize those of our former perceptions which can ally themselves with the present perception to take a share in the final decision. If it is necessary, when I would manifest my will at a given point of space, that my consciousness should go successively through those intermediaries or those obstacles of which the sum constitutes what we call *distance in space*, so, on the other hand, it is useful, in order to throw light on this action, that my consciousness should jump the interval of time which separates the actual situation from a former one which resembles it; and as consciousness goes back to the earlier date at a bound, all the intermediate past escapes its hold. The same reasons, then, which cause our perceptions to range themselves in strict continuity in space, cause our memories to be illumined discontinuously in time" (ibid.) [italics in original].

In Bergson's explanation, subjectivity is a mode of being that is always inclined towards action, and the consciousness consists of an unveiling of that which will assist the subject in making decisions regarding its actions. Everything superfluous in relation to action is rejected, both in memory and perception. It is this rejection that gives memories their particular appearance of relative discontinuity. Memories from the past are represented as distinct events, separated by intervals of time, and perception, accordingly, appears as representations of objects in space, ordered in degrees of distance. The spatio/temporal establishment of differences in degree (distance) and kind (interval) lends meaning to the actions of the subject.

The meta-subject could be ascribed a similar exigency towards action, as it also aims to create allies in its decision making process. However, there is a difference in how it manifests memories and perceptions, temporally and spatially. In the meta-subject of BIPED-me, there is a multiplicity of abstract representations. Each performative Sign corresponds to a level of conscious manifestation of the abstract: the turning motion of a computer-generated humanoid, the oscillating weight of a female dancer, the images on a screen representing video recordings of past performances, and memories of theatrical performances experienced in a theatre. As demonstrated above, the performative Signs cannot effectively be understood in terms of the temporality of Bergson's SAB cone, as the Signs appear to move around fluidly at different levels within the cone, sometimes even coexisting in P, S, AB, and at any additionally given level within the cone. Hence, in order to adapt Bergson's idea of how consciousness differentiates space and time to the meta-subject, the SAB cone stated in terms of the temporal has to be complemented with another cone, stated in terms of abstraction. The cone of abstraction does not replace Bergson's cone, which is still valid, but it adds the element required for an intuitive understanding of the lived experience of the metasubject. The cone of abstraction thus coexists with Bergson's temporal cone, as a ghost-like double, explaining how something that both exists in the pure past and the absolute present, in the unconscious of the cybernetic performative, still may be identified as a specific kind and degree of abstraction. Below, I will look in closer detail how the two cones interact with each other.

(c) Meta-subjective intuition and repetition

From the meta-subjective perspective of *BIPED*-me, processes of encoding, decoding, representation, and signification may appear at any level in Bergson's cone of temporality. To illustrate: as I watch BIPED during a live performance in the theatre, I see a representation of a humanoid moving across the gauze in front of the stage. This representation, as already discussed, may be understood as a Sign which also serves to couple me with the performance as a meta-subject. The difference between my perception of the humanoid as a conventional subject and a meta-subject is mainly a temporal matter. From the perspective of the conventional subject, the representation of the humanoid appears, moves across the screen, and disappears. All of this gives me a sense of a present moment as a particular experience of duration. However, on the meta-subjective level, the representation of the humanoid traversing the screen also serves as a cybernetic performative interface, which couples me to the subjective embodiment of a dancer who at some previous instance in time was performing the same movement sequence as the humanoid, while being surrounded by the motion capture equipment. Hence, the representation of the humanoid, as a meta-subjective experience of a present moment, was in fact already firmly situated as a memory at the base AB of Bergson's temporal cone *prior* to the appearance of the humanoid figure to the conscious perception. Meanwhile, the actual data strings, representing the images of the moving humanoid, are neither present to the conscious perception of the metasubject, nor do they exist as a memory, but they are permanently situated in plane P of the cone.

The important point here is that from the meta-subjective viewpoint, temporality largely loses its meaning as a method of ordering and stratifying experience. From a purely temporal perspective, the past, the present, and the future appear to conflate in the meta-subject. However, in my above example of the humanoid figure, there is another kind of difference which serves to bring structure to the meta-subjective states of consciousness and unconsciousness: levels of encoding and abstraction of that which is represented. Those are the differences which are addressed by means of the cone of abstraction.

Looking at the moving humanoids in terms of the cone of abstraction, it is possible to identify several different meta-subjective levels of representation: the data strings, the images, the physiological processes of sensory perception, and the interpretative reading of the images, all of them existing as different kinds and levels of abstract representational states of consciousness and experience. Stated in terms of time, the projections of encoded data as a screen representation absolutely coincides with my meta-subjective sensory perception and interpretation of the images. However, stated in terms of levels of abstract encoding, the data, the image, and the reading of the images are all unique experiences situated at different levels of experience in the cone.

On the other hand, the cone of abstraction cannot effectively operate on its own in relation to intuition. The cone of temporality shows distinctions where the cone of abstraction does not. For instance, in each specific instance of playing the video representation of *BIPED* (Atlas et al., 2001), or in reading Foster's (1998) text describing the female choreographer, the data strings and the text, respectively, have an identical level of abstract encoding each time they are approached. However, in terms of time, they are divided into unique levels of independent experiences of past/memory and present/perception. But the interdependency between the abstract and the temporal cones means that there is one further aspect of perception and experience that needs to be addressed. This is the concept of repetition, which plays a crucial role both in Bergson's (1908) original definition of the temporal cone, and in Deleuze's (1994) development of Bergson's ideas.

I have already briefly touched upon some aspects of repetition, for instance in that there is a difference between the first and the second time I read a representation. However, looking at the meta-subject from a Bergsonian and/or Deleuzian viewpoint, repetition takes on a most crucial role in the manifestation of various levels and kinds of representation. For instance, based on Bergson's notion of the temporal, even the first time I experience a representation could be read as a repetition. In fact, Bergson suggests, "Nothing *is* less than the present moment, if you understand by that the indivisible limit which divides the past from the future" (1908, p. 150). Instead, Bergson describes an actual, lived moment in the present as a representation of the absolute present, constituted as a memory image arriving from the immediate past:

"In the fraction of a second which covers the briefest possible perception of light, billions of vibrations have taken place, of which the first is separated from the last by an interval which is enormously divided. Your perception, however, instantaneous, consists then in an incalculable multitude of remembered elements; in truth, every perception is already memory. *Practically, we perceive only the past*" (ibid.) [italics in original].

If the lived, present moment is understood as a perception which arrives at the present from the past, then every lived experience is in fact a repetition of a representation, which in itself is a repetition. Memory repeats multiple instances of absolute presents, derived as samples from the continuously moving point S in Bergson's cone,⁸ in the form of a synthetic representation, which appears to experience in the form of a duration, illuminated from memory as a lived present because of the will to action of consciousness (ibid., p. 146). Each lived present, represented as a duration, is thus a selective repetition of past memories, which itself is a synthetic repetition of absolute presents.

However, with the notion of experience as a representation constituted by repetitions of repetitions, another set of challenges appears. Most significantly, there is a question as to what it is that is represented, and how does the representation differ from that which is represented, or repeated? Moreover, how does the repetition of the representation differ from the representation itself? It appears that at the core of these questions, there is an issue of difference. Each repetition can only be represented if it is somehow differentiated from the previous repetition, which must be differentiated from that which is represented as a repetition.

VI. Conclusion

While the first part of this chapter exemplifies the cybernetic performative through an analytical, macroscopic mapping, the last section firmly locates my discussion in the realm of the intuitive. I have demonstrated how the meta-subjective perspective has implications in terms of temporality and durational experiences. My suggestion of complementing Bergson's temporal cone with a cone of abstraction also emphasises the crucial role of abstract representational practices in the meta-subject. In fact, it seems impossible to comprehensively account for the durational experience of the meta-subject without paying attention to the dual role of the Sign, and its relationship to memory, perception, and time. Moreover, each of those three concepts, memory,

^{8.} See page 144.

perception, and time, have been revealed as being dependent on the notion of repetition, which in turn relies on difference. In order to investigate precisely how all these concepts affect the subjective constitution of the perceiving cybernetic performative, I will continue in the next chapter with a more detailed study of the meta-subjective durational characteristics corresponding to my perception of *Clip 1*.

Chapter 5: Repetition and difference

I. Introduction

This chapter consists of a close study of one particular movement from *Clip 1*, to be specific, the oscillating advance across the stage of the female dancer. The aim of the chapter is to illuminate how difference and repetition are intimately related in the intuitive understanding of the cybernetic performative duration. In the previous chapter, I read Bergson's concept of the experienced present as a repetition of repetitions, in the form of a conscious illumination of memories, synthetically represented as a duration containing multiple instances of absolute presents, arriving from the past. Moreover, in Chapter Three, I touched upon the notion of fundamental difference as a crucial element in relation to representational practices. In this chapter, difference, repetition, and representation are brought intimately together, revealing a more detailed view on how the cybernetic performative constitutes itself as an abstract temporal representation.

I will look at the movement from *Clip 1* from two different viewpoints. The first serves to demonstrate Bergson's notion of the indivisibility of a durational experience, and the second to exemplify the synthetic characteristics of the same. The discussion of synthesis highlights the close relationship between Bergson's temporal cone and the cone of abstraction, first outlined in Chapter Four, by means of drawing an even closer analogy between Deleuze's synthetic constitution of time and the cybernetic performative representation of its durational constitution. The analogy between the constitution of time and cybernetic performativity was, in a more indeterminate manner, already introduced in Chapter Three, as part of my identification of the role of the Sign in the abstract performative. However, the case study from Chapter Four of the oscillating movement from *Clip 1* gives the necessary grounding in perceptive practice to give a more comprehensive and detailed representation of the cybernetic performative constitution of difference.

II. Representing X, Y, and Z

In the previous chapter, I partly described the initial fourteen seconds of *Clip 1* as consisting of a female dancer travelling forward across the stage while performing an oscillating movement with her support in a wide second position on demi-point. Based

on my proposed development of Bergson's cone of temporality, with the addition of its double, the cone of abstraction, the oscillating travelling movement could be understood as one particular instance of a repetition of a memorised duration, representing a series of absolute presents. The repetition has a particular duration, which in terms of objective time lasts fourteen seconds, and in terms of my perception, from the moment that I see the dancer appearing until she stops her oscillation.

While being in the process of generating a representation of the oscillating movement as a present duration, I am simultaneously experiencing a series of other, shorter durations, which may be represented as distinct movements, such as the sweeping arm movements and the changes of focus by the dancer. Hence, my perception arguably consists of several different repetitions of synthesised memories as durationrepresentations, superimposed on each other. Since it is possible for durations with different temporal extensions to coexist, it is also possible to conceptualise the idea that the fourteen seconds of oscillation-duration could in fact be understood as a series of shorter movement-durations, which together would synthesise the oscillation that I am perceiving just as memory synthesises instances from the absolute present. If this were the case, my experience of duration corresponding to a perception of an oscillating movement could be described as a synthesis of representations of repetitions, meaning that each duration could be divided into several shorter ones.

In order to try out the above hypothesis of longer durations as representing a synthesis of shorter durations, I will propose that the oscillating movement of the dancer in *Clip 1* could be perceived as being composed of three shorter movements, or strictly speaking, two movements and one position in space. The first movement, which I will call "X", is the representation of transferring body weight from the left foot to the right foot. This transfer of weight from the left to the right foot coincides with a small, incremental forward movement of the left foot, which accumulatively generates the forward motion of the dancer. The forward movement of the left foot could be analysed as a separate movement, but for the sake of simplicity, I will include both the weight transfer and the forward motion of the representation of a shift of weight from the right foot to the left foot, with the right foot incrementally moving forward.

At this point, it might be possible to see the dancer's oscillation as consisting of repeated performances of the movement set XY, composed of movement X followed by Y. On the other hand, it is also possible to read the oscillation as if there is no movement Y, and the repetition really consists of the dancer trying to perform movement X as quickly as possible, raising the question of what would be in between the repetitions of X? Since I have identified X to be followed by Y, then Y would in fact be a representation of difference, as it serves to differentiate the repetitions of X. The oscillation could alternatively be read as a repetition of Y, but in this case, X would constitute the difference which demarcates the repetitions of Y. Yet another possibility is that the dancer might in fact not be repeating a movement at all, but instead, she is as quickly as possible trying to return to position "Z", signifying a representation of an experience of weightlessness, a hovering in the air in between the two points of support. In this case, the perception of an oscillation consists of repetitions of Z. However, as above, there is a question as to what would be in between the repetitions of Z. Moreover, in the first case, reading the oscillation as a repetition set XY, what would differentiate each repetition of the set?

It appears from the above discussion that the question of how to subdivide my experience of an oscillating movement into shorter movements is open to many alternative and subjective readings, lacking any obvious reasons why one should be preferred to the others. However, there is an even more problematic aspect linked to the above attempt to describe the oscillating movement as consisting of representations of repetitions and differences. Bergson (ibid.) highlights this problem in his refutation of the ancient Eleatic philosophical tradition, which in a series of narrative paradoxes presents movement itself as an impossible absurdity.

III. Indivisible movements and difference

As a response to the Eleatic philosophical tradition and Zeno's paradoxes, Bergson points towards what he perceives as an analytical misconception of the nature of movement, change, and difference. Instead of analysing movement as, for instance, a quantifiable distance between two objects or places, as in Zeno's paradox of Achilles and the Tortoise, or as a sequential occupation of progressive positions in space, as in Zeno's paradox of the Bow and the Arrow, Bergson (1946, p. 167) suggests that "what we should have to do is to grasp change and duration in their original mobility".

It seems as if Bergson proposes a kind of mobility that is not derived from, defined by, or represented as locations, points, or intervals of and in, space and time. Instead of quantifying movement into smaller and smaller intervals of space an time, as in my identification of the X, Y, and Z, he suggests that "We shall think of all change, all movement, as being absolutely indivisible" (ibid., p. 168). In the work *Matter and Memory*, Bergson touches upon a similar idea, stating that "Every movement, inasmuch as it is a passage from rest to rest, is absolutely indivisible" (1908, p. 188).

Bergson's notion of indivisible movement is derived from the fact that Bergson does not state the problem of movement in terms of space, but in time, and hence, movements are not quantifiable in the form of distances or locations, but in terms of experiences of duration, occupying a particular section between S and AB of his cone model, which I discussed in the previous chapter.⁹ However, there is one aspect of the cone that I have not yet touched upon, which is how the fluctuating levels of contraction and relaxation operate between different durations. While the touching of the top of the cone, S, on plane P, represents an ideal state of perception in the absolute present, where all matter is distributed in space, and the base of the cone, AB, represents all unconscious memories of a subject in time, the body of the cone does not represent a proportional scale of differences in degrees of memory/past and perception/ present. Instead, the purpose of the cone is to divide memory and perception, past and present, into differences in kind, and each duration is a particular composite of those differences in kind. Hence, a movement towards the tip S or the base AB of the cone, as a relaxation and contraction, respectively, does not simply correspond to a higher or lower degree of presentness or pastness, but to a complete reconfiguration of the differences in kind that characterises any particular duration.

My previous effort to divide the oscillating advance of the female dancer into smaller durations X, Y, and Z, could be used to illustrate the Bergsonian process of relaxation as a production of difference in kind. When I try to divide the oscillating movement into smaller parts, I am in fact changing my experience of duration from a more contracted state to a more relaxed state, and here lies one of the keys to an understanding of Bergson's indivisibility of movement: I cannot divide the oscillating movement into smaller parts unless I change my state of duration in kind, which in turn

^{9.} See page 144.

will affect my representations of subjective embodiment, space, and time. It is by means of entering a more relaxed state of duration that X, Y, and Z appear as movements characterised by smaller quantities of space and time than the oscillating advancement. Thus, my perception of the oscillating movement was never composed of a synthesis of representations of X, Y, and Z, but it was a repetition of an entirely different synthetic representation, corresponding to a particular kind of contraction.

As my state of contraction alters in kind, the movement correspondingly changes in kind as well, not in degree of spatial and/or temporal presence. The change of kind from an oscillating advance to X, Y, or Z could be exemplified through how the resonance within the meta-subject instantly becomes modulated by a change of duration in the conventional subject. Crucially, and as I have discussed towards the end of Chapter Three, the triggering of the resonance effect is largely dependent on the inherent sensitivity in the system, including the gaze of a conventional subject. Hence, as I change my state of duration to perceive the movements X, Y, and Z, instead of an oscillation, I also reconstitute my performative embodiment as a conventional subject with a particular anatomical and physiological structure.

(a) The kinaesthetic connection

Reynolds's (2007) concept of kinaesthetic empathy could be used to provide one example of how changes in the state of duration modulate the resonance within the meta-subject: When I see a weight transfer from the left to the right foot, as in X, I experience the physiological and anatomical traces of having broken my left ankle many years ago, in the form of a minute hesitation, and a faint sensation of numbness, perhaps even an indistinct pain, at the point of initiation of the movement, when all the weight is loaded on, and accelerates from, the left foot. On the other hand, during movement Y, I feel a sense of strength and lightness in the departure from the point of support on the right foot. Moreover, Z provides me with an entirely different reverberation, where I experience a brief moment of excitement as the dancer hovers weightlessly in the air, followed by an increased sense of gravity and heaviness at the end of the brief moment of flight. All these experiences are entirely different not only from each other, but also from the sense of a continuous traversing of the stage space, which I experience while attuning my sense of duration to the advance of the oscillating movement.

The suggestion that the oscillating movement is *not* composed of repetitions of X, Y, and Z, since such a proposition would end up in an Eleatic paradox (Bergson, 1908), but that they all represent entirely different kinds of movements, gives rise to an alternative view of the structure of time, causality, and perception. It is neither the case that I, in the past, perceived X, Y, and Z, or the oscillating movement, nor did repetitions of X, Y, and Z give rise to the oscillation. Instead, X, Y, Z, and the oscillating advancement all coexist in the past, and they never were any actual presents, but repetitions of past representations of presents as different states of duration. Deleuze (Deleuze, 1994) reads the implication of Bergson's concept of duration, contraction, and relaxation in the following way:

"Repetition is no longer a repetition of successive elements or external parts, but of totalities which coexist on different levels or degrees. Difference is no longer drawn *from* an elementary repetition but is *between* the levels or degrees of a repetition which is total and totalising every time" (ibid., p. 287) [italics in original].

In Chapter Three, I touched upon some affinities between Deleuze's concept of difference and Derrida's (Derrida, 1973, p. 82) notion of "difference". In Derrida's view, it would be a mistake to assume that speech acquires its power to communicate owing to differences in meaning inherent in the various symbols and representations used in language, as if a signifier could be ascribed a particular meaning on its own. Instead, Derrida points out how a close reading of symbolic practices, such as speech, will result in an internal breakdown of the system's ability to represent any expression or coherent meaning. The reason why speech suffers from such an internal instability, according to Derrida, has to do with the fact that any symbol derives its meaning from a more fundamental kind of difference, the difference, which envelops and infuses the entire system of language. Difference, according to Derrida, is non-derivative, absent of origin itself, but constituting the origin of the differentiation that separates the various symbols in systems of representation, such as speech, to the effect that "speech had already from the start fallen short of itself" (ibid., p. 87).

With the concept of differance, Derrida moves beyond a strictly linguistic context, criticising the notion that any phenomenon could possess any inherent meaning. For instance, in *Speech and Phenomena*, Derrida (ibid., p. 104) refers to differance as a means of demonstrating the impossibility of a pure Husserlian transcendental

reduction, arguing that "the thing itself always escapes". He also situates differance as that which originates or generates patterns of relative difference, or systems of difference, in relation to which meaning may exist as states of differentiated relationships. In this sense, difference is proposed as the fundamental difference "without which no other difference in the world would either make any sense or have the chance to appear *as such*" (ibid., p. 11) [italics in original].

In terms of temporality, one of the implications of a totalising fundamental difference is the breakdown of the past/present/future structure of time. In Chapter Four I have already discussed how a present moment, from an intuitive and meta-subjective viewpoint, is a repetition of the past, represented to experience as duration, as in the case of seeing the humanoid figures crossing the screen during a live performance of *BIPED*. However, Deleuze's (1994, p. 286) reading of Bergson moves one step further, suggesting that "This was Bergson's splendid hypothesis: the entire past at every moment but at diverse degrees and levels". But if all different movements coexist as diverse degrees and levels of duration, and are not arranged along a present/past timeline, why is it that I still perceive, or represent, movements as passing chronologically in time?

In Chapter Three, I compared the function of the Sign in the abstract performative to Deleuze's (ibid., p. 79) description of how memory grounds the conventions of time as a past/present/future construct. However, a closer reading of Deleuze reveals that the memory that grounds time is a particular synthetic construct, which is intimately linked to two other processes of synthesis. All three syntheses are instances of Deleuze's notion of "contemplation" (ibid., p. 74), which shares many of the features of Bergson's concept of duration. However, a contemplation not only operates in terms of relative states of relaxation and contraction, but it also moves between the particular and the general. Below, I will take up the ideas introduced in Chapter Three, in order to develop further the structural affinities between the cybernetic performative and Deleuze's contemplative grounding of time.

IV. Contemplations of difference

Both Bergson's concept of duration and Deleuze's contemplation are strongly connected to the concepts of temporality and repetition. The intuitive division of a temporal duration, or a contemplation, however, does not correspond to the subjective experience of a past, present, and a future, as something that was, is and will be. Rather, from Bergson's (1908) perspective, such a temporal division is an abstract intellectualisation of time, in the form of an analytical relaxation of the contracted duration of the present. Deleuze (1994, p. 71), on the other hand, explains the asymmetric characteristics of time, which appears to flow univocally from the past towards the future, via the present, as a product of a certain "originary" synthesis of repetitions of instants:

"Time is constituted only in the originary synthesis which operates on the repetition of instants. This synthesis contracts the successive independent instants into one another, thereby constituting the lived, or living, present. It is in this present that time is deployed. To it belong both the past and the future: the past in so far as the preceding instants are retained in the contraction; the future because its expectation is anticipated in this same contraction. The past and the future do not designate instants distinct from a supposed present instant, but rather the dimensions of the present itself in so far as it is a contraction of instants" (ibid., pp. 70-71).

The originary synthesis that Deleuze identifies in the above quote corresponds to the first synthetic contraction in the constitution of time, also referred to as the passive synthesis of "habit" (ibid., p. 73). In Deleuze's terminology, a habit corresponds to a pre-reflective synthetic generality, which is contemplated from series of particulars, or instants. In this process of synthesising particulars, it is indeed possible to read the act of contemplation as a perlocutionary performative set diagram, in so far as it constitutes a subjective temporal experience of a lived present with a past and a future. In such a reading, the Performance set would correspond to the process of synthesising particulars, the Symbol set would be signified as a representation of time, and the Act set coincides with the appearance of a subject which consciously represents itself as existing in time, a temporal being. However, in my application of the three perlocutionary performative sets to the synthetic act of contemplation, the Act set seems to need rather more explanation: More specifically, how and why does the subject represent and structure itself in terms of time?

I have previously discussed how different durations may coexist in juxtaposition. Hence, the oscillating movement that I perceived of the female dancer in *BIPED* could also be represented as a completely different series of durations, in the form of, X, Y, and Z, corresponding to an entirely different lived experience by the perceiving subject. However, X, Y, and Z could also be looked at from another perspective, i.e. Deleuze's contemplation of the particular and the general: The perception of the oscillating movement could be understood as a habitual contemplation on my part, in which I prereflectively generalise a series of XY particulars. It is absolutely crucial, however, to note that there is a significant difference between regarding XY as a form of duration, versus understanding XY as a pre-reflective synthesis of particulars. The former corresponds to a unique, lived, subjective experience, fully embedded in a past and an anticipated future, whereas the latter operates at a performative level prior to the subjective constitution of time. In the next section, I will turn my attention to the specific reasons why XY may be used to exemplify both of those conditions, but for now, it will suffice to say that just as durations of various kinds coexist, so do the contemplations of the particular and the general. What appears as a particular on one level may serve as a general on another level, depending on the scale of the contemplation in question.

As my reading of X and Y changes from that of a form of duration to a particular, the role of difference must also be addressed. Previously I have discussed the differences between X and Y, and their repetitions, mainly in terms of representations of the same or the dissimilar. However, on the pre-reflective level of habit, X and Y do not appear to me as distinct representations, yet they are somehow differentiated from each other in the synthetic compound of the general. Hence, the notion of fundamental difference, or a difference which exists prior to representation, takes on a most crucial role. This fundamental difference is strongly connected to Deleuze's idea of difference in itself, which cannot be represented, since it is that which makes representation possible: "Difference is not and cannot be thought in itself, so long as it is subject to the requirements of representation" (ibid., p. 262).

Even on the level of representation, however, there are traces of fundamental difference. For instance, in my identification of repetitions of the set XY, 1 must somehow identify the disappearance of one XY and the start of another. Hence, there is something which makes it possible for me to differentiate one set XY from another, or as Deleuze puts it, "*Difference lies inbetween two repetitions*" (ibid., p. 76) [italics in original]. My movement from the particular to the general, as a pre-reflective, passive synthesis of sets of XY is thus completely dependent on some kind of production of difference, or a differentiating factor, which gives rise to the concept of a repetition of representations of instants. Without this productive kind of difference, there would not

appear to my perception any instances of XY, nor any generality in the form of a contracted oscillating movement.

However, if difference lies between two repetitions, then, conversely, repetition should also lie between two differences. Thus, each set of XY that I contract is not just demarcated by difference, but each XY is itself an order of difference, demarcating difference itself. The same logic would apply to any repeated particularity that is being contracted into a generality. For instance, since the set XY is a contraction of X and Y, both X and Y are differentiated from each other by difference, but they are themselves differentiators between those very differences that makes X and Y differ from each other. The particular Z creates yet another layer of differentiation within the differences of X and Y. Hence, repetition and difference appear to be different sides of the same coin, where each contracted repetition of a particular within a generality simultaneously performs a role of being a visible representation of difference, and at the same time being the differentiator between the differences that in their turn makes the particular to appear as a representation being repeated, ready to be contracted through contemplation. Repetition is itself a representation of difference.

(a) Repeating the particular

One additional aspect of the difference/repetition dualistic character of the XY particular is Deleuze's (ibid., p. 295) idea that "repetition bears upon repetitions". This statement could be interpreted in at least three ways, depending on which kind of synthesising contemplation is applied to the statement. I have already mentioned that Deleuze specifies three different kinds of synthesis: two passive and one active. The first passive synthesis is that of habit, the originary synthesis, which gives a foundation to time as a present with a future and a past as dimensions of that present. The second synthesis, which is active, provides an "*embedding* of presents themselves" (ibid., p. 81) [italics in original], and gives rise to the intellectual capacities of reproduction, analysis, and reflection. The third synthesis provides the ground for the active synthetic embedding of the presents constituted by the first passive synthesis: a passive synthetic contraction of "the pure, *a priori* past" (ibid.) [italics in original], which is situated in the static AB base in Bergson's cone.

While Deleuze mainly focuses on how repetitions bear upon repetitions in relation to the third synthesis, the context of studying the various roles played by XY in my perception of *BIPED* lends itself to a wider interpretation of repetition than given by Deleuze. I have already exemplified above how the particular XY may take part in the first passive synthesis as pre-reflective instances which, when contemplated, bear upon each other in the constitution of a representation of an oscillating movement. Additionally, XY, as a repetition bearing upon repetitions, could be understood on the level of the active synthesis, where X and Y may be represented as distinct embodied experiences of movement, a condition which I have already briefly discussed earlier in this chapter.¹⁰ However, a closer look at the case when X and Y are understood as analytical representations of repeated particulars, which by means of intellectualisation may be contemplated as a generality of oscillation, will reveal further details in terms of the performative constitution of subjective temporality.

The act of contemplating successive particulars, in the form of Xs and Ys, as I watch the female dancer in *Clip 1*, has a direct effect on the temporal characteristics of my experience of duration. When my contemplation accumulatively expands by means of contracting additional particulars, so does also my concept of time: in my contemplation of the generality of the female dancer's oscillating advance across the stage, my lived present moment becomes slightly expanded each time I contract a new differentiating particular into my contemplation. Analytically speaking, my lived present eventually reaches a quantitative duration of approximating fourteen seconds, which is the time it takes for the female dancer to complete her oscillating movement and stand still, when I perform my contemplation based on the representation of *BIPED* in Clip 1. It is important to keep in mind, however, that this contemplation of the oscillating movement only exists on the level of a conventionally constituted performative subject. From the perspective of the meta-subject, the fourteen seconds that I have observed in relation to *Clip 1* simultaneously constitute a performative Sign within the cybernetic performative, which means that the entire lived present of the performative BIPED-me extends well beyond the presently discussed subjective framework: The dancer, the choreographer, the humanoids, and I as a spectator, are all coupled as a reverberating meta-subject which contracts, contemplates, represents, and repeats unique temporalities and abstractions of pasts and presents, memories and perceptions, particulars and generalities, on a much larger and fragmented scale. I am

^{10.} See pp. 157-159

here studying only one isolated case of duration, which in reality is one minor part of a larger matrix of temporalities.

It is, however, possible to expand the temporality of the contemplated oscillation further than the fourteen seconds of *Clip 1*. The dimensions of the past and the future could be further extended from the present, for instance through a contemplation of the immediate context of the oscillating advancement of the female dancer. In this case, the oscillation itself takes on the role of being a particular, as my scope of contemplation extends. Immediately prior to my witnessing the female dancer's entrance, I was watching a section of BIPED containing a pas de six, in which some of the dancers, just before exiting from the stage, were travelling with an oscillating movement, which appeared very similar to the oscillation of the subsequent female dancer. Since the last elements of the pas de six still remain as part of my durational representation of a present as the female dancer enters with her oscillating walk, I immediately contract a new generality that contemplates both the XYs of the female dancer, as well as the XYs of the preceding pas de six. Hence, even though all the dancers of the pas de six have already disappeared from the stage, I still repeat my contraction of their XYs in my new contemplation of the female dancer's XYs. Each contemplation of XYs into an oscillating generality becomes here part of a more extended contemplation, where each oscillation plays the role of a particular.

Yet, my newly formed representation of a present, in which I contract the oscillating particulars both of the *pas de six* and the female dancer, quickly exhausts itself. After a few seconds, analytically speaking, of watching the female dancer moving forward, I see three male dancers entering the stage, and I become absorbed by the spatial relationship between the walk of the three male dancers and the oscillating advancement of the female dancer, and the oscillating movement takes on a new meaning as a contraction involving a representation of a contraction of the particulars generalising the walk of the male dancers.

The generality represented by an approach of the male dancers towards the female dancer also begins to makes me anticipate a future: How long will the female dancer keep on oscillating? How far will the female dancer reach on the stage before the male dancers catch up with her? Will the male dancers catch up with her? What will happen

if they do? I contract into my present a representation of future possibilities, which in themselves are repetitions projected into a representation of a future.

Meanwhile, there is an even larger generality which represents a more extensive view of time. As I project a resolution of the male dancers' approach towards the female dancer, in the form of abstract representations of possibilities in a future, which also is a repetition of a representation of a memorised past, I start to consider the end of the choreography: Will the work link itself back to the beginning through a repetition of movement representations, or will the end produce a difference that gives me a sense of progression towards a representation of something new, as an external rhythm, linking back to Martin's (1933b) terminology? Will I be able to perceive any kind of coherence between the representation of a beginning and an end? The above questions, extending a perception of a present into a past and a future, a beginning and an end, further illustrate Deleuze's point of seeing the past and the future as dimensions extending from the contracted present.

In Deleuze's view, everything can be understood as a certain level of contraction of the particular into the general. The examples given in my study of *BIPED*, as weight transfers and a suspension in the air, represented in my text as X, Y, and Z, is by no means exhaustive. Every conceivable particular movement is also a generality which can be broken down into even smaller particulars, until they would reach a molecular, or even sub-atomic level:

"What organism is not made of elements and cases of repetition, of contemplated and contracted water, nitrogen, carbon, chlorides and sulphates, thereby intertwining all the habits of which it is composed? Organisms awake to the sublime words of the third *Ennead*: all is contemplation!" (1994, p. 75) [italics in original].

The omnipotence that Deleuze assigns to the concept of contemplation casts new light on the notion of reverberation within the cybernetic performative. Any generality is ultimately composed of shared particulars, starting from subatomic vibrations and gradually becoming more and more generalised, as lower-level generalities become contracted, appearing as particulars, by higher level-generalities. The vibrations become atoms, contracted into molecules, matter, organs, bodies, sensations, kinaesthesia, straight through to the meta-subjective *BIPED*-me cybernetic performative. Representations of structural formations based on scientific, social, technological, psychological, and philosophical discourses reverberate with each other by means of their sharing of innumerable sets and contractions of particulars into generalities. The nexus points, or Signs, of the cybernetic performative are the material manifestations through which the reverberations become represented as temporal and spatial events and objects, enacted along axes of degrees of difference, signifying pasts, presents, futures, memories and sensory perceptions.

V. The third synthesis

I have so far discussed the appearance of an oscillation, X, and Y, based on the female dancer represented in *Clip 1*, based on the first passive and the second active syntheses of Deleuze's contemplation. On the level of the passive synthesis of habit, X and Y do not appear to my consciousness as representations, just as the atoms of a drop of water do not appear to me as individual atoms, but as the generality of a drop of water. Instead, X and Y are synthetic instants of the general representation of an oscillation, and as instants, they partake in my subjective constitution of time. On the other hand, at the level of the active synthesis of memory, X and Y are represented as discrete movements on their own, already fully constituted as durations of the general. In the following section, 1 will address some of the relationships between the passive synthesis of habit and the active synthesis of memory, and additionally, explain how the third synthesis, the passive synthesis of memory (ibid., p. 81), is related to the cybernetic performative.

One significant characteristic of Deleuze's contemplations is that they never appear in isolation. Instead, one particular contemplation is always related to, supporting, or giving support to another. And in this cluster of interrelated contemplations, there is at some point a gradual shift, or a vaguely specified zone, where the contemplation of a passive synthesis may be represented as an active synthesis, available for analysis and semiotic interpretation. The layering of contemplations may be illustrated by the physiological activity which, analytically speaking, gives rise to vision: In order for me to see the movements of the female dancer in *BIPED*, the retina of my eyes must contract instances of light waves or photons. The contraction of light is subsequently synthesised as electrochemical signals, which travel through my nervous system to my brain, where the signals are further contracted as mental images, giving rise to my consciously and actively synthesised representation of the movements of the female

dancer. Another passive synthesis, supporting my subjective activity of observation, is performed by the muscles around my eyes, which contemplate the nervous signals arriving from my brain as a precise balance of tension and release, making it possible for me to reliably focus my vision on the activities of the dancer.

The above contemplations concerning my visual perception serve to exemplify some of Deleuze's passive syntheses. They are not carried out consciously by a subject, but they occur in that subjective consciousness, prior to all reflection and memory. The significance of those passive syntheses in relation to my conscious perception of time lies in their capacity to enforce a direction of time which is irreversible, and hence, Deleuze defines the contemplations of a passive synthetic character as being "asymmetrical" (ibid., p. 71). In addition to their constitution of temporal directionality, the passive synthetic contemplations that give rise to my present sense of duration are normally hidden, performed below the level of subjective consciousness, for instance in the form of lightwaves, heat, minute electrical fields, and chemical reactions within my body. Hence, in the vast majority of cases, the passive synthetic contemplations are imperceptible. Yet, all those more-or-less invisible contemplations, based on the principle of passive synthesis, are continuously working as little contemplating selves, which collectively constitute my embodied subjectivity. Hence, even subjective acts that may not appear to mundane sense-perception as being repetitive, are ultimately composed by layers of repetitions and difference. Each time I perceive a movement in BIPED, that perception is underpinned and made possible by an innumerable multiplicity of passively synthesised contemplations:

"Underneath the self which acts are little selves which contemplate and which render possible both the action and the active subject. We speak of our 'self' only in virtue of these thousands of little witnesses which contemplate within us: it is always a third party who says 'me'. These contemplative souls must be assigned even to the rat in the labyrinth and to each muscle of the rat. Given that contemplation never appears at any moment during the action - since it is always hidden, and since it 'does' nothing (even though something is done through it, something completely novel) - it is easy to forget it" (ibid., pp. 75-76).

Deleuze's description of the hidden nature of the passive synthesis, as thousands of little selves contemplating differences and repetitions, constituting a conscious subject, also serves as a partial description of how the *BIPED*-me is constituted as a meta-

subject. Underneath my subjective perception of the movements of the dancers in *BIPED*, there is a multitude of hidden little selves, contemplating different levels of passive synthesis. For instance, all the people and processes involved in the production of the costumes, the set design, the computer graphics, and the video recording/post-production are part of the irreversible temporal direction of my perception of a passing present. Thus, the *BIPED*-me could be described as a synthetic multiplicity (Cassirer, 1953) of both active and passive contemplative selves, each self representing a particular duration, juxtaposed with all the other durations.

Some of the "little selves" of the multiplicity contemplated by the *BIPED*-me may be represented as conventional subjects, such as Suzanne Gallo (costume designer), Aaron Copp (lighting designer), Gavin Bryars (composer), and indeed Cunningham himself as a choreographer. While it may seem counterintuitive that a conventional human subject, which normally is represented as an active and self-conscious agent, from the perspective of the *BIPED*-me corresponds to a passive synthetic contemplation, this situation has to be understood from the meta-subjective viewpoint on the temporal. As I am brought into a state of coupling with *BIPED*, whether this happens during a live performance in the theatre or while watching a representation of a video recording, all the artistic, creative, and active choices by Cunningham and his collaborators, which from an analytical viewpoint may be represented as active synthetic contemplations in the past, are in my perception synthesised as particulars in the contemplated generality of my present.

Moreover, all the particulars that are passively contemplated in my present state of duration enforce upon me the asymmetry of time, so that any active agent in the past is transformed into a passive synthetic, as it were, little self. Once the particulars have formed a generality, it is impossible to undo the synthesis: I cannot by any conscious choice reverse my asymmetrically represented direction of time and interfere with the creative choices made by Cunningham, Gallo, Copp, Bryars, or any other embodied subject involved in the making of the product *BIPED*, any more than I can interfere with the hidden passive little selves that on a molecular level make my eyes contemplate the oscillations of lightwaves hitting my retina. What I can do, however, is to analyse my particular contemplation in the form of an active synthesis of memory, and by doing so, affect my embedding of the representations of a present, past, and future. In other words, I can actively modulate my own contemplation as a subject, or a

meta-subject, and through that modulation I am able to indirectly affect how the Sign of the cybernetic performative couples me and *BIPED* together. Hence, it is possible for me to dynamically, but indirectly, alter the synthesis of my phenomenal performative series.

(a) Synthesising the cybernetic performative

In Deleuze's (1994, p. 77) terms, the passive synthesis of habit which produces the asymmetric characteristics of time is classified as "natural", while the analytical embedding of that temporality is performed by the "artificial" active synthesis, constituting "the active faculties of reflective representation, memory and intelligence" (ibid.). Applying Deleuze's distinction between the natural and artificial, it is possible to draw an even closer analogy between his synthetic contemplations and the cybernetic, or abstract performative. I already sketched out a suggestion for such an analogy in Chapter Three, in my discussion of the abstract performative. There, I suggested a structural similarity between how memory grounds time and how the Sign grounds embodied conventions. The analogy was built on the idea of the three performative, the three sets were closely attached to the idea of the Sign, which I also called the cybernetic performative interface, owing to its dual role of both providing symbolic meaning and establishing a nexus point of coupling between disparate systems.

In my definition of the abstract performative, I suggested that the Performance of directing my gaze towards the Sign generated Symbolic meaning, as a connotative reading of that Sign, which gave rise to the Act of constituting a dynamic, reverberating, performative feedback system of subjectivity. Based on my discussion on Deleuze's contemplation, this analogy could be developed further by a more comprehensive understanding of how the passive and active syntheses relate to the constitution of duration as a subjectively perceived present.

Starting with the Act set, this is a highly complex set in the sense that it contains all the phenomenal performative series as well as the objectified conventions that the series synthetically give rise to. Hence, the Act could be seen as the performative counterpart to the passive synthesis of habit, mainly operating below the level of objectified consciousness in the constitution of a body image. The intellectual capacities of reflection and analysis, which belong to the active synthesis of memory, could be seen

as representing the production of meaning in the performative Symbol, corresponding to a connotative reading of the Sign. The first set of the performative, however, the Performance, would neither be adequately represented by the passive synthesis of habit, nor by the active synthesis of memory. The reason for this is the paradoxical state of the Performance set in the cybernetic performative.

The paradox of the Performance set could be traced to the fact that in order for the subject to direct its gaze on the Sign, both the Symbol and the Act need to have been activated already. The Sign could not be read as a representation unless there already was an active synthesis of memory at work, but the active synthesis must be founded on the passive synthesis of the phenomenal performative series, or the habit, which in turn cannot exist unless they have already been triggered by the reading of the Sign as a representation. Hence, the very condition that would give rise to the entire performative process, the representation of a lived present as a duration, seems to be lacking.

The above paradox gives yet another analogy between Deleuze's (ibid., p. 81) concept of contemplation and the cybernetic performative, because the third synthesis, the passive synthesis of memory, shares a similar paradox to the Performance set. According to Deleuze, the passive synthesis of memory is the contemplation that provides the ground for the foundation of habit, which constitutes a present asymmetric temporality, which in turn is embedded in other representations of past presents by the active synthesis. But the passive synthesis of memory is a contemplation of "the pure, *a priori* past" (ibid.) [italics in original], which is situated at the immobile AB base in Bergson's cone. The fact that the ground for time, and all further contemplation, is situated in the pure past, gives rise to a temporal paradox:

"we necessarily speak of a past which never *was* present, since it was not formed 'after'. Its manner of being contemporaneous with itself as present is that of being posed as already-there, presupposed by the passing present and causing it to pass. Its manner of coexisting with the new present is one of being posed in itself, conserving itself in itself and being presupposed by the new present which comes forth only by contracting this past" (ibid., p. 82) [italics in original].

Just as the pure past, while never having been present, has a pre-existence in relation to the present which it causes to pass, so is the Performance set, as a contemplation of the gaze and the Sign, presupposed by the Act and the Symbol, yet having no existence outside of the performative framework. Hence, both for the constitution of the passing present, and for the performative constitution of a subject which represents that present as a duration, "the ground comes rather from the sky, it goes from the summit to the foundations" (ibid., p. 79). The meta-subject, like time, has no deep ontology, but comes into being by means of a paradox, the sky descending to provide a ground for the foundation. This still poses the question as to what this sky consists of, and how it is possible for it to descend?

(b) Reaching towards the sky

The identification of the sky may be traced by means of another problem of time introduced by Deleuze, which challenges his theory on habit and memory: "At first sight, it is as if the past were trapped between two presents: the one which it has been and the one in relation to which it is past" (ibid., p. 80). As such, the past does not manage to become a past as a representation of a former present, but it is used as the element by which the subject focuses on the present. In the Abstract performative, this situation would approximately correspond to an inability of the subject to dynamically reconstitute itself, as it would be trapped in representing itself based on an idea of what it was, and a reverberation as a cybernetic performative would not be successfully triggered. However, the image of a trapped present does not materialise, owing to the fact that it is based on a distortion of the representation of time:

"The limits of this representation or reproduction are in fact determined by the variable relations of resemblance and contiguity known as forms of association. In order to be represented the former present must resemble the present one, and must be broken up into partially simultaneous presents with very different durations which are then contiguous with one another, and, even at the limit, contiguous with the present present" (ibid.).

In the above quote, Deleuze refers to the limitations inherent in the concepts of reproduction and resemblance, which implies the notion of repetition as a representation of the similar. Thus, the image of a past caught between two presents, the present of memory and the present of habit, does not, in its representation of time, take into account the role of fundamental difference in relation to temporality. This problem not only concerns the grounding of time, and the corresponding duration of the cybernetic performative meta-subject, but a similar problem also lingers from my

previous discussion on the division of the oscillating movement of the female dancer in *BIPED* into X, Y, and Z.

The idea of dividing the oscillating movement into smaller parts was intellectually possible, but on the level of duration as a representation of a lived experience. impossible. Hence, the possibility introduced through intellectual analysis is only hypothetical and has no reality, insofar as it is not part of a durational representation. As I already have demonstrated,¹¹ a division of the oscillating movement into XYs produces a difference in kind, and not a difference in degree of the more extensive movement. Yet, I was also referring to the X and Y as particulars which were synthesised into the contemplation corresponding to the oscillation, suggesting a certain irreversibility. Yet, the active synthetic contemplation did give rise to the possibility of representing X and Y as durations retrospectively, in spite of the fact that my original duration was an extended oscillation. The apparent contradiction here is partly rooted in the analytical distortion introduced through Merleau-Ponty's transitionsynthesis, where the second act of attention recasts the phenomenal structure into causative structures where representations are allowed to accumulate. However, the problem is even more concerned with the concept of repetition as a reproduction of representations of the similar or the different, without taking into account the role of fundamental difference. Hence, a further understanding of my meta-subjective durations while watching and analysing the oscillating movement, or X, Y, and Z, of the female dancer in *BIPED*, must be accompanied by an even closer study of the role of difference.

VI. A realm of difference

I have demonstrated above how the perception of asymmetric time, where the past and the future extend as dimensions from the present, as well as the perception of duration as a representation of this or that lived experience, may be seen as synthetic products. Accompanying this view, Deleuze suggests that there is an alternative way of relating to time and duration, by means of realising the full implication of Bergson's intuition, as illustrated in the SAB cone. The alternative is to conceive that all durations, pasts, and presents, coexist, so that "each present present is only the entire past in its most contracted state" (ibid., p. 82). Thus, according to Deleuze's reading of Bergson's

^{11.} See pp. 161-163.

model, the entire cone, stretched out in time from the past to the present, always exists as a whole, at all times. Remembering the past is another way of expressing the state of mind that is represented as memory, and giving full attention to the present expresses the state of mind that is represented as perception. Further, to say that each present is a contraction of the entire past is but another way of saying that the entire past is a relaxation of the present. Between the two extreme states of mind, in practice unattainable - the completely relaxed, pure past/memory and the absolutely contracted present/perception - there are, at every moment, an infinite number of differentiated past/present configurations, which are "so many repetitions of the whole of our past life" (Bergson, 1908, p. 168). Thus, the entire past is not only contemporaneous with the present, but this contemporaneity also consists of a multitude of repetitions of differentiated mind-states of past/presents, or memory/perceptions. Each present, thus, is grounded in an infinite repetition/differentiation of various states of itself, in the form of a contemplation.

Keeping in mind the image of a present existing as a repetitive differentiation of itself, in fact, presupposed as a past in the present, it is possible to clarify the relationship between my perception of an oscillation of the female dancer in *Clip 1*, and my subsequent analysis of the oscillation as consisting of sets of Xs, XYs, and/or Zs. All those variations are in fact representations of different durations which absolutely coexist as simultaneous repetitions of each other, and by entering various states of relaxation/contraction, I am able to reverberate with different configurations of contemplated active and passive syntheses within the cybernetic performative *BIPED*-me. Moreover, through the reverberation of the cybernetic perceptions of every part of the meta-subjective *BIPED*-me coexist as one extended chord of presents and pasts, as contemplations of active and passive syntheses. Deleuze describes the way in which all different reverberations are brought to bear on each other:

"In other words, the sign of the present is a *passage* to the limit, a maximal contraction which comes to sanction the choice of a particular level as such, which is in itself contracted or relaxed among an infinity of other possible levels. Moreover, what we say of a life may be said of several lives. Since each is a passing present, one life may replay another at a different level, as if the philosopher and the pig, the criminal and the saint, played out the same past at different levels of a gigantic cone. This is what we call metempsychosis. Each chooses his pitch or his tone, perhaps even his lyrics, but the tune remains the same, and underneath all the lyrics the same tra-la-la, in all possible tones and all pitches" (1994, pp. 83-84) [italics in original].

The idea of a gigantic cone that plays out all differences as repetitions, contemporaneous to each other, also marks a suitable point to recall some of the characteristics of Cunningham's work *Story* (1963). The story of *Story* was/is a synthetic multiplicity of repeated stories, all coexisting in and as the work, yet constituted by each and every audience member that ever saw *Story*, represented as durations in the form of different composites of memory/perception repetitions. My reverberation with Cunningham through the nexus of *BIPED* is yet another repetition of Cunningham's work *Story*, and indeed, a repetition of the entire past of the *BIPED*-me as a meta-subject, contemplating all the different dance performances that I have ever seen, and that Cunningham ever made.

Thus, my retrospective analysis of *BIPED*, during which I recollect the oscillation of the female dancer and I analytically re-synthesise my sense of duration in relation to my perception of her movements, this contemplation in fact coincides with my experienced duration of the live performance. In fact, my recollection of the live performance could in this sense be argued to constitute yet another performance of *BIPED*. Yet, speaking as a conventional subject, or even as a meta-subject, I distinctively have a sense of an asymmetric temporal unfolding of events, in the sense that when I was watching *BIPED*, I did not perceive X, Y, and Z, but they came into existence as analytical constructs, and my analysis most definitely appeared to me as taking place after I perceived the live performance of Cunningham's work. The asymmetry of time introduced through the passive synthesis of habit seems to dictate my subjectivity to the extent that an intuitive perception of the coexistence of all those repetitions and differences appears impossible to represent. The difficulty, however, lies precisely in the concept of representation, which is an inadequate tool for the purpose of identifying that which always differs: fundamental difference.

In order to address that which it is impossible to represent, or even impossible to analyse, Deleuze (ibid., p. 262) has developed conceptual strategies which point towards the traces of the operations, or structures, which are generated by that which always differs. For instance, one such strategy is to identify the differentiation inherent in the "virtual content of an Idea" (ibid., p. 207), and also to study the processes of actualisation of the virtual. In the next chapter, I will discuss the implications that

Deleuze's notion of the virtual as a differentiated Idea has for my meta-subjective perception of *BIPED*. Moreover, since Deleuze largely derives his notion of the virtual from Bergson's cone-model, and I have demonstrated that in terms of cybernetic performative perception, the temporal cone is accompanied by a cone of abstraction, I will address how the dual cone-model to some extent affects the virtual content in my observation of *BIPED*.

VII. Conclusion

The discursive development of this chapter corresponds to a synthesising process. Starting out with representations of different perspectives of X, Y, and the oscillating movement, I eventually arrive at the argument that all different viewpoints and perspectives are indeed coexisting at all times. Indeed, my study of one particular movement from BIPED can neither, from a strictly intuitive viewpoint, be separated from Cunningham's entire oeuvre, nor from my history as a constituted subject, since everything coexists in the totality of the temporal/abstract double cone. However, the habit of producing a representation of asymmetric time still seems to prevent me from acquiring full durational access to that realm of fundamental difference, the virtual source of every durational representation of the actual. Due to the temporal asymmetry of my habitual durational, difference appears in the form of representations of past presents, and not pasts that are coexisting in the present. A duration is brought to differ from itself through an analytical re-reading of my memory of a past duration, which repeats that original duration as a representation of something different or something similar. However, without being able to access the virtual realm of fundamental difference, any duration is but yet another example of a subjective duration which has no more or less validity than any other duration in relation to the central aim of my discussion. Moreover, the intimate and reverberating relationships in the virtual between the various durations are lost along a linear and causative temporality belonging to the realm of the actual. The question is, how far is it possible to push my sense of duration towards the virtual realm, and what gains would there be in such an act? In the next chapter, I will look in more detail at Deleuze's representation of the virtual, and investigate the practical implications that a movement towards the virtual realm has in terms of meta-subjective perception.

Chapter 6: A study of virtuality

I. Introduction: Recapping the virtual

In this chapter, the aim is to bring all the threads from the previous chapters together at a juncture point in the realm of the virtual. This is important, in order to fully understand how the perception of an embodied movement always transcends its particularity in the realm of the actual and establishes a reverberation in the virtual which performatively reconstitutes the perceiving subject. In order to grasp how this reverberating performative virtual reconstitution occurs, I will use Deleuze's strategies of addressing that which is beyond the power of representation, yet constituting the origin of representation: the virtual structure of difference in itself. I will refer to two similes used by Deleuze, the "egg" (1994, p. 251) and the "theatre" (ibid., p. 216), both illustrating the differentiating, or in Deleuze's language, "differenciating" stages that separate the virtual from the actual in different ways.

To give a brief recap of the previous virtualities that I have discussed, in Langer's (1953) view, as well as in Preston-Dunlop's (1981) application of Langer, the virtual exists as unreal primary illusions, produced by and only existing within the imagination. In Langer's case, the illusion consists of virtual powers, and in Preston-Dunlop's reading of Langer, it is virtual space. Reynolds's (2007) construct of virtuality, on the other hand, is real, insofar as it consists of physiological kinaesthetic reactions. However, Reynolds's virtuality is also partly founded on a reading of Merleau-Ponty's (1962) motor intentionality, and she defines the nervous sensations of kinaesthetic empathy as providing a virtual potential, outlining possibilities of future actualisation of movements as embodied displacement. In my reading of Bergson and Deleuze, however, I have addressed the notion of the possible as a concept which does not partake in a constitution of the real, but instead exists as an analytical abstraction, based on a representation of time that is derived from the two processes of synthesis of time, habit and memory. If the possible appears as real, this is only an illusion based on the analytical distortion introduced through Merleau-Ponty's transition-synthesis of the second phenomenological process of attention. Moreover, in relation to actual movement, I have demonstrated that embodied displacement is an inadequate definition of movement, since such a spatial representation of movement would fail to take into account the durational characteristics, as stated in terms of time, that Bergson identifies in movement, as well as the absolute coexistence of all durations as simultaneous repetitions of each other within the cone of temporality.

The reason why Deleuze's realm of the virtual is difficult to perceive in a context of representation is that the virtual, as it were, hides behind the actual representations. Thus, the contemporaneous virtual repetition of all duration is masked by the representation of actual repetition as distributed along a series of past presents. In other words, the contemporaneity of my perception of *BIPED* and my analysis of the work, as durational repetitions of each other, takes place in the realm of the virtual, whereas my representation of a subjectively lived and sensed experience in the present is derived from a process of actualisation of the virtual, whereby asymmetric time is synthetically enforced upon my perception.

Since the virtual is a normally hidden aspect of reality and does not show itself through representation in the actual, Deleuze outlines a theoretical strategy and terminology by which he is able to address that which avoids representation. However, Deleuze's terminology is not straightforward, and it cannot be, since the virtual only shows itself as an act of hiding behind that which becomes actualised. The virtual, thus, carries the notion of something which always differs, providing the basis for a theoretical model that operates by means of identifying differences by means of difference, or in Deleuze's terminology, "systems of simulacra" (1994, p. 277). The systems of simulacra span the realms of the virtual and the actual, and as it crosses over, the virtual envelops itself in the actual. This process may for instance be traced in how Deleuze's notion of "intensity" (ibid., p. 232) transforms as it passes from the virtual to the actual.

The chapter will start by addressing the notion of the intensive, or intensity, which serves to structure difference in the virtual realm. Referring to the analogies of the egg and the theatre, I will then identify the progressive states of representation during the process of actualisation of the virtual. However, the actualisation of the virtual is described by Deleuze as a simultaneous cancelling out of the fundamental difference which is represented, and hence, from an intuitive viewpoint, there is a choice whether this cancellation of difference should be stated in terms of the temporal, as suggested by Bergson and Deleuze, or the abstract, as suggested in my discussion. Relating the

process of actualisation to the meta-subject, I propose a complementary rule to Deleuze's third rule of intuition, offering a choice in how to apply the intuitive method.

However, having offered a complementary rule to the method of intuitive division, the question still remains as to what it is that is divided. Hence, the final part of this chapter is concerned with the division in kind, between the virtual and the actual, in the cone of abstraction. As part of this division, I discover yet another performative category, citing the very process of actualisation of the virtual abstract. The identification of this new performative is crucial, since it is posed as a counter-movement to the actualisation of the virtual in terms of time, and hence, it adds a dynamism to meta-subjective perception. The duration of the meta-subject becomes a representation of a movement in two directions, where a process of actualisation is always accompanied by a process of virtualisation in the dual cone of temporality/abstraction.

II. Intensive difference

Intensity, according to Deleuze (1994), has three characteristics. The first is that it represents the unequal, or difference in itself. In the realm of the actual, intensity represents differences in quantity, such as distance. But the quantity of the intensive is primarily defined as having an "ordinal" quality (ibid., p. 232), in contrast to being cardinal, and Deleuze points in his argument towards the development of mathematics to support his priority of the ordinal: "In the history of number, we see that every systematic type is constructed on the basis of an essential inequality, and retains that inequality in relation to the next-lowest type" (ibid.). In the virtual, the ordinal intensity creates an order of difference, or a "*spatium*" (ibid., p. 233) [italics in original], which cannot be cancelled out, since the difference is entirely of ordinal character. But according to the second law of thermodynamics, the non-equilibrium of the ordered spatium calls for a homogenisation: "Every domain is a qualified and extended partial system, governed in such a manner that the difference of intensity which creates it tends to be cancelled within it (*law of nature*)" (ibid., p. 241) [italics in original].

The cancellation of the intensive is achieved by means of the virtual enveloping itself in the actual, during which intensity becomes extensity, "extension being precisely the process by which intensive difference is turned inside out and distributed in such a way as to be dispelled, compensated, equalised and suppressed in the extensity which it creates" (ibid., p. 233). The transformation of the ordinal intensity into a cardinal extensity could be exemplified by looking back at my discussion of the oscillating movement of the female dancer in Chapter Five. The different kinds of durations that corresponded to the representations of the oscillation as one single advancing movement, or as repetitions of X, Y, and Z, are actualisations of intensive ordinal structures of difference in the spatium. The notion of an oscillation that may be broken down into the analytical parts, such as X, Y, and Z, corresponds to a certain cancelling out of the intensive, as the intensive envelops itself in the form of extensive, cardinal quantities of space, time, and bodies.

The second and third characteristics of Deleuze's concept of intensity are closely related to, or directly derived from, its representation of the unequal: The second characteristic is that "intensity *affirms* difference" (ibid., p. 234) [italics in original]. The affirmation of difference in the intensive may be seen in the absolute coexistence between all different levels and degrees of ordinal duration in Bergson's cone, versus the analytical representation of cardinal events in time, which favours one or the other, and distributes the exclusive alternatives along a temporal axis stretching from the present into the past as representations of the similar, hiding the role of difference. For example, while the intensive simultaneously accommodates all the existing durations in my perception of *BIPED*, my analysis of the work divides them up into a former perception and a subsequent analytical recollection: the discovery of X, Y, and Z was temporally divided from my experience of seeing an oscillating movement live on stage.

The third characteristic of the intensive has to do with the embryonic state of the ordinal structure of the spatium. The inequalities between the smaller and the greater in the spatium are neither differences of degree, nor differences in kind, but rather, they provide the asymmetric relationships that stimulate the accelerations and decelerations of movements which become differences of kind and degree. As an embryo, the spatium solves the problematic question of "is there a difference in kind, or of degree, between differences of degree and differences in kind?" (ibid., p. 239) Deleuze's answer to the question is: "Between the two are all the degrees of difference - beneath the two lies the entire nature of difference - in other words, the intensive" (ibid.). Since Deleuze places such great importance on the notion of the intensive structure of the virtual spatium, I will explore in more detail how the intensive relates to the actual as a

system of simulacra by means of two analogies given by Deleuze: the analogy of the "egg" (ibid., p. 251) and the analogy of the "theatre" (ibid., p. 216).

(a) The egg and the theatre

The "embryonised" (ibid., p. 237) characteristics of the intensive order of difference in the spatium could be illustrated by means of looking at the development of an egg into an individual. In an egg, there is no actual manifestation of the qualities and quantities characterising a fully developed individual subject, such as organs, limbs, a body, an intellect, etc. Instead, there is a virtual structure of the spatium consisting of a field of differentiating intensities, determining the relations and initiating a sequence that propels the egg through the four actualising states of "differentiation-individuationdramatisation-differenciation" (ibid., p. 251). The first step from the virtual into the actual happens as the differentiation becomes individuated, which marks the very appearance of an egg, or an embryo, as such. During the stage of dramatisation, there are certain "spatio-temporal dynamisms" (ibid.) at work, establishing the embryo as a particular species. The dramatisation also marks, in Deleuze's terminology, the first step of a "differenciation" (ibid.), which at the level of the dramatisation is of a "specific" kind, establishing specimens, as opposed to the "organic differenciation" (ibid.) that characterises the final step of the actualisation of the embryo as a fully embodied individual with organs.

While the analogy of the egg gives a sense of how the spatium acts as an embryo, it may not seem obvious how the actualisation of the egg compares to my experience of observing *BIPED*. However, Deleuze (ibid., p. 216) also compares the situation of staging a theatrical performance to the process of actualising the virtual. In his theatre, the organic differenciation of the egg into organic parts is compared to the existence of actors; the dramatisation stage (the specific differenciation) corresponds to the roles played by the actors; the enactment of the roles is dominated by theatrical spaces, which equals the stage of individuation, and the theatrical spaces are governed by originating ideas, corresponding to the differentiation of intensities in the virtual field of the spatium.

Based on the two above analogies, it is possible to make a comparison between Deleuze's systems of simulacra and my perception of *BIPED*. Reading my process of observing *BIPED* as a system of simulacra, it appears that my viewpoint for the most part has been situated at the stage of organic differenciation (ibid., p. 209), furthest

away from the virtual state of the intensities of the spatium. My positioning in the realm of the organically differenciated is not only apparent in my representation of a past experience/observation and a present analysis, but it is also evident in how I have chosen to represent that which I have observed. My descriptions in Chapter Four of the dance sequences represented as *Clip 1* and *Clip 2* shows a marked presence of representations of organically differenciated parts: embodied dancers, disembodied humanoids, arms, legs, and movements described as changes of spatial/anatomical relationships. Hence, my mode of perception is firmly situated at the level of organic differenciation, and my state of duration, in terms of Bergson's (1908, p. 162) temporal cone, hovers very close to where the top S touches the plane P.¹² The close proximity to S implies that my observational contemplation is dominated by the passive synthesis of habit, which is evident in my emphasis on the chronology of movement, describing the order of how one movement follows another.

From the above point of observation, situated in the stage of differenciation (Deleuze, 1994, p. 209), and characterised by a domination of the actors in Deleuze's analogy with the theatre, it is possible to move one step back from the realm of the actual, towards the virtual, and make another observation based on a viewpoint from the stage of specific differenciation of the spatio-temporal dramatisations. The dramatisation stage is characterised by the roles dominating the actors, or in the case of the egg, the appearance of species. From this viewpoint, the arm of the female dancer represented in *Clip 1*, which from my previous perspective was sweeping through a second position towards a low backwards-facing direction, ceases to be a specific anatomical arm, belonging to a particular dancer. Rather, the arm is the arm of a dancer, a certain species of dancer, as it were, capable of performing movements characterised by Cunningham's legacy. The movement, moreover, is not a specific movement, but again, a species of movement, a technique, a certain style of performing a movement.

Observing *BIPED* from the viewpoint of dramatisation, I withdraw even further from my earlier proximity to the top, S, of Bergson's cone. The sweeping arm, which in the specific differenciation (ibid.) exemplified certain generic movement qualities and features of the Cunningham technique relates in an even more general sense to my subjective knowledge about Cunningham. Thus, when the arm sweeps behind the body,

^{12.} See page 144.

I do not see any specific intention by Cunningham, rather I read the movement as having an exchangeable nature. I read in each movement the possible presence of chance and indeterminacy. My contemplation during the stage of dramatisation contracts instances recollected from a wide range of temporal and spatial representations of memories, as opposed to my previous habitual synthesis of the immediate here and now, as in the cases of organic and specific differenciation.

A further step back towards the virtual, and I am shifting my viewpoint into the realm of individuation, the stage of the appearance of an embryo, using the analogy of the egg, and in terms of the theatre, a stage dominated by spaces. In the stage of individuation, I am a generic spectator, situated in a generic theatre, watching a dance performance, which could be any dance performance. My experience loses both the organic and the specific differenciation, and this dance performance, or this theatre, is like any other. Even the subjective I that performs the watching becomes an undifferenciated (ibid.) entity: "I" am a generic member of an audience. Finally, moving on to the stage of differentiation, the realm of the actual is abandoned, and what is left is the ordinal structure of intensity in the spatium. This stage precedes the appearance of the egg as an entity, as well as the space of the theatre. There is only one kind of existence at the theatrical level of the differentiated, which dwells in the virtual realm of "Ideas" (ibid., p. 168), or intensive structures of the spatium. Ideas are utopian, inaccessible for the actual realm of the differenciated (ibid., p. 209), just like the supremely contracted point of insertion of the top of Bergson's cone,¹³ S, on the plane P, or like the total relaxation of memory at the base of the cone, AB, which in Deleuze's view of reality corresponds to the same thing.

(b) The cancellation of difference

The absence of any differenciation (ibid.) in the Idea does not mean that there is an absence of structure. Instead, the Idea is structured by a differentiation of the ordinal series of intensive differential relationships. The ordinal series, in their turn, are structured, and brought into reverberation with each other, by means of "singularities", from which the ordinal series depart into the depth of the spatium, until they converge or diverge with the ordinal series from other, surrounding singularities:

^{13.} See page 144.

"A singularity is a point of departure for a series which extends over all the ordinary points of the system, as far as the region of another singularity which itself gives rise to another series which may either converge with or diverge from the first. Ideas have the power to affirm divergence; they establish a kind of resonance between divergent series" (ibid., p. 278).

The realm of the differentiated is not accessible by means of the representation of the realm of the differenciated (ibid., p. 209), however, the two realms still stand in a very intimate relationship to each other, like two sides of a coin. Just as the performative Sign has a double nature as both a representation and as a cybernetic performative interface, so will the ordinal series, differentiated by means of the singularities in the spatium, turn inside out and become explicated as extensive qualities and quantities. The process of explication itself is caused by the law of nature that tries to cancel out difference, "Whence the double aspect of the quality as a sign: it refers to an implicated order of constitutive differences, and tends to cancel out those differences in the extended order in which they are explicated" (ibid., p. 228).

The explication of virtual ordinal series into qualities and quantities through a cancellation of difference has a direct bearing on my experience of perceiving a performance of *BIPED* live in the theatre: I enter into a theatrical space, dedicated to performance practices. The space is divided into a stage and an auditorium. In the auditorium, there is an audience, waiting for the performance to start, directing its attention across the expanse of space between itself and the performers. The performers, on their part, are waiting in the wings on the stage, anticipating the immediate future, when they are expected to perform what they have been preparing during innumerable rehearsals in the past. In the above scenario, there are quantitative divisions of spatial distances and temporal intervals everywhere, but all those quantitative expanses of time and space are filled with intensive qualities, emotions, expectations, excitement, nervousness, and anticipation. All those differenciated (ibid., p. 209) extensities are the outside, actual doubles of the inside intensities of the spatium, forming a system of simulacra. At the level of the differenciated (ibid.), my gaze, charged with a desire to see and to traverse the space dividing me from the performers; and a dancer, perhaps sweating, nervous, eagerly awaiting her entrance from the hidden place behind the wings onto the exposed stage. A mixture of qualitative emotions: perhaps nervousness, curiosity, expectation, boredom, restlessness, exhaustion, wonder, and admiration. All of those extensive relationships,

quantitative and qualitative, governed and actualised in their respective specificity are in Deleuze's world based on the presence of virtual singular points, differentiated by intensity.

However, as I watch the performance, the ordinal intensive series, enveloped in the extensive, are cancelled out, as my gaze traverses the extensity of space separating me from the dancers, and the desire I had to watch the performance turns into perception, eventually deposited in the past as a memory. At this point, the singularities of the spatium that enveloped themselves as extensity have cancelled themselves out, and have forever become redistributed by a new virtual structure of differentiation, making it impossible for me to see the same actual representation of *BIPED* twice, as a repetition. No representation of the differenciated (ibid.) can ever truly be repeated, as it consists of a cancelling out of the intensive differences that caused it to become actualised first place. Deleuze emphasises the conclusive and irreversible cancellation of difference that the process of actualisation causes:

"There is an illusion tied to intensive quantities. This illusion, however, is not intensity itself, but rather the movement by which difference in intensity is cancelled. Nor is it only apparently cancelled. It is really cancelled, but outside itself, in extensity and underneath quality" (ibid., p. 240).

The above citation from Deleuze gives a secondary, and more fundamental understanding to his definition of fundamental difference, and its role in relation to repetition. Since the virtual cancels out its inherent difference every time it becomes actualised, representations of the differenciated (ibid., p. 209) can never be truly repeated, but it is only difference itself that has the power to be repeated. Hence, repetition as a succession of representations of the similar, stretched out along a timeline from the past to the present, is only a representation of the realm of the differenciated, causing a cancellation of its corresponding virtual repetition, which is a coexistence of "levels or degrees of a repetition which is total and totalising every time" (ibid., p. 287).

There are two problems connected to the idea of a virtual structure that at every moment is cancelling itself in the actual. First, if that were the case, how is it possible to perceive repetition as a representation of the similar if the virtual differential structures that give rise to the actual are already cancelled out at the first instance? For instance, in my perception of the oscillating movement, it is after all possible for me to represent the movement, in the form of a reflective recollection of the live performance or the video representation, as a repetition of Xs, Ys, or XYs.

One solution to the above problem is that a representation of a repetition is, in the more fundamental sense that Deleuze ascribes to repetition, in fact no repetition at all. Seen from the perspective of individuation of the virtual, each movement X, corresponding to a shift of weight from the left to the right foot of the female dancer in *Clip 1*, is part of an ordinal series of intensive differentials. Thus, the oscillating movement traces, or progressively moves along, an ordinal series, each actual shift of the dancer's weight being an incremental actualisation of a virtual asymmetry, departing from a singularity in the spatium.

Eventually, after approximately fourteen seconds in the actualised instance of *BIPED* represented as *Clip 1*, the dancer comes to rest. The end of the oscillating movement does not, however, necessarily mean that the singularity from which the ordinal series departed is completely cancelled out, but instead that the series has reached a region dominated by the influence of another singularity, from which other differential series depart, converging or diverging with the series actualised as an oscillation, causing the actualised representation of the oscillation to stop.

In relation to my experience of watching *BIPED* live in the theatre, the presence of a new singularity may be exemplified by means of the arrival of the three male dancers, who subsequently perform a lifting sequence with the female dancer. In such a manner, the actualisation of the oscillating sequence diverts and the virtual series become influenced by new singularities as Cunningham's work unfolds, eventually reaching the end of the choreography. At that point, all the singularities inherent to the work converge with the larger-scale singularities governing the actualisation of the work in the theatre and its particular schedule for the evening: the programme for the evening reaches its end, and the theatre is emptied of people, at which point the singularities from which the ordinal series corresponding to the audience's departure from the theatre are actualised.

Are the singularities from which the series actualised as an oscillation and the series actualised as a lifting of the female by the three males cancelled by the end of the evening of the performance? Not necessarily. The particular evening's programme I attended in the theatre was part of a bigger tour, involving singularities that originate ordinal series which actualise as contemplations of temporal asymmetries containing new performances as the tour unfolds. The tour itself is part of even larger scale singularities, governing the actualisation of a repertory of the Cunningham dance company. Moreover, at some point, while the work *BIPED* is in the process of being actualised from the virtual series as part of the active repertory of the Cunningham company, a particular set of singularities originates and diverts certain ordinal series to become actualised as codified strings of data in the form of a video recording, eventually included in Atlas, Blum, and Cunningham's (2001, video on DVD) documentary. Hence, my observation of the recording represented in *Clip 1* is in fact integral to a large-scale reverberation, or a meta-subjective duration, which includes my perception of live performances of *BIPED*. In this sense, the video recordings of *BIPED* are at one level part of the same duration as my perceptions of the live performances.

The repertory of the Cunningham dance company, the tour during which I watched a performance of *BIPED*, the particular performance I experienced, my observation of the video recording represented in *Clip 1*, all constitute indivisible durations, just as my perception of particular movements from the tour is indivisible (Bergson, 1946, p. 168). It is only through analytical intellectualisation of a duration that I am able to represent that duration as divisible into separate parts. I already exemplified such an intellectualisation in my previous discussion on how my perception of the oscillating movement of the female dancer may be divided into repetitions of XYs, and a similar case could be made of the idea that the video recording of *BIPED* is an extract, fragment, or divisible part of *BIPED* as a theatrical work. At one durational level, it is part of the same indivisible reverberation, and at another level, it is a unique duration of its own kind.

I may also analytically represent repeated instances of performances of the work *BIPED* as if they were divisions from a seasonal tour of the Cunningham dance company, while they from a durational point of view are different in kind: *BIPED* perceived as an isolated piece of choreographic work and *BIPED* perceived as part of a touring schedule of a dance company. In any case, the appearance of a repetition of that which is similar in the actual corresponds to, in the realm of the virtual spatium, no

repetition at all, but a tracing of ordinal series departing from a singularity that cancels out itself in its actualisation, for instance as a touring schedule of the Cunningham dance company containing several representations of *BIPED*. While the ordinal series corresponding to the touring schedule is in the process of unfolding, the smaller singularities of the individual actual movements during a performance will occur as small diversions from the dominating series, as the are influenced by the regions of the smaller singularities.

(c) Difference and analysis

The second problem connected to the notion of a cancellation of the virtual through actualisation has to do with my process of analysis of the work BIPED. One of the reasons why I set out to explore how the virtual possibly could contain my past and present as absolutely contemporaneous was that during the process of developing my analysis, I discovered additional ways of reading BIPED that had not appeared to me as representations while I was watching the performance. According to Deleuze's (2002) reading of Bergson's cone model, all my various interpretations should be able to coexist as repetitions of different levels of duration. However, instead of having been granted access to any kind of representational reading, or level of duration, of BIPED, I have found that in my observation of the choreographic work, the very structure of the virtual spatium which actualises my perception partly cancels itself out in every actual representation. The problem with this is that it is not only the repetition of representations of the same, that is rendered impossible, but also a repetition of the virtual structures that actualised the representations. Two questions arise from the above problem: First, how is it at all possible that I can make a retrospective analysis of something that is not repeatable, even in the realm of the virtual; and secondly, does this impossibility of repetition imply that as I represent *BIPED* for the purpose of my analysis, I am in reality performing a recreation of the entire work as such, not as a repetition, but as an entirely new and original performance?

Since not only actual representations are unable to be repeated, but also the ordinal series behind each representation, I have reached the point where it is clear that at every moment I perceive a representation, it is not only my present that is affected, but at a stroke, my entire past has changed. Nothing is ever repeated, and I can never go back in time and access all the lost repetitions in the virtual, since the differential and asymmetric structures that actualised the appearance of repetitions have already been cancelled and replaced by other patterns of singularities. This is why Deleuze comes to

the conclusion that the eternal return cannot be said to be a return of the same, similar, or equal, but instead, it is a return of "a world *without identity*, without resemblance or equality. It is said of a world the very ground of which is difference, in which everything rests upon disparities, upon differences of differences which reverberate to infinity" (Deleuze, 1994, p. 241) [italics in original]. As I have pointed out in the previous chapters, this notion of difference does also to some extent reflect Derrida's (2002) concept of difference as an origin of appearances.

The problem of a return versus difference could be exemplified through my earlier suggestion that it was during retrospective analysis that I saw the possibility of reading the movements X, Y, and Z as durations that could replace, or complement, my previously perceived duration of a continuous oscillation. How is it possible that X, Y, and Z could potentially replace my original perception? One answer that could be derived from my reading of Deleuze - which poses the idea that it is impossible for a return of the same, similar, or equal - is that I in fact never had a lived experience of a female dancer that performed a continuous oscillating movement. Instead, my memory of a past lived experience of watching a female dancer, slowly advancing by means of an oscillating movement, is a representation of a contemplation of past presents that never were present presents. In other words, just as when I was watching BIPED, live or as a video representation, I was in every moment during my retrospective reflection on *BIPED* cancelling out the virtual intensities that were actualised as subjective representations of space, time, qualities and quantities. As a result, the answer to the second of the above questions is: Yes, as far as the spatium is concerned, I am in fact performing an entirely new creation of BIPED each time I subject the work to analytical reflection, which will generate a completely new representation as a subjective duration. Hence, the answer to the first question is that my analysis is not retrospective at all, but it is in fact another durational experience of a present performance of BIPED.

(d) The third complementary rule of intuition

The suggestion that each time I analyse the work *BIPED* I also perform *BIPED* may seem difficult to assimilate from a temporal perspective, as it implies not only that my entire history is recast each time I analyse *BIPED*, which is not only an analysis, but indeed an entirely new performance of the work. If nothing else, this would cause issues in terms of copyright: who owns the intellectual property rights to my historical recasting of the work? Moreover, this would also raise questions related to the apparent

irreversibility of the originary synthesis, that of habit, and the asymmetric time introduced through its pre-reflective contemplation of instances into a generality. Yet, my analysis of *BIPED* has not, as far as I am aware, caused any breaches in intellectual property rights, nor has it manufactured a past of additional actual performances of *BIPED* by the Cunningham dance company. Instead, the root of the matter here seems to be located, not in the passive synthesis that constructs asymmetric time, but in the passive synthesis that grounds both time itself as well as the representation of the Sign: the whole issue is located in the "sky" (Deleuze, 1994, p. 79) of the temporal/abstract double cone of intuitive division.

However, both in Bergson's original presentation of the cone, and in Deleuze's reading of Bergson's method of intuition, there are only temporal divisions of kind, such as past/present, memory/perception, particular/general, but no division in terms of the abstract. Hence, it appears that there is an urgent need to reformulate, or make an addendum to the rules of intuition as a method, for the purpose of my observation of *BIPED*, and potentially in relation to the wider field of dance analysis and practice. In Chapter Four, I introduced the concept of a double cone, a cone of abstraction that complemented Bergson's temporal cone. The cone of abstraction was presented as a response to the identification of a composite of existence in the meta-subject which went beyond the duality of memory/perception. Instead, the experience of a meta-subject was proposed as a trinity of memory/perception/abstraction, and consequently, the intuitive method has to be adjusted accordingly in relation to the division of the meta-subject.

Deleuze's third rule of intuition says: "State problems and solve them in terms of time rather than of space" (2002, p. 31), and the complementary rule could perhaps be formulated something like this: If the problem is not entirely solved, or unsatisfactorily solved, by means of the third rule, try to state the problem and solve it in terms of abstraction instead of time. The importance of adding the complementary rule is not only due to the fact that the abstract has a most profound constitutional role in the meta-subject, primarily in the double function of the performative Sign, but additionally, as discussed in Chapter Four, abstraction sometimes usefully replaces the notion of time for the purpose of structuring difference in kind in the meta-subject. However, I have not yet addressed specifically how the abstract would be intuitively divided, in terms of being represented as a cone with a top and a base. Below, I will apply my suggested third complementary rule of intuition to my previously suggested analytical practice, with the purpose of establishing how the cone of abstraction may be internally structured.

The observational and analytical practices of this study, performed through the perception of the BIPED-me meta-subject, have mainly been actualised by means of three main categories of representation: Live performances, video recordings, and text. The images that I, as a conventional subject, see on the screen as I watch, for instance, Clip 1 and Clip 2 could partly, and on a very basic level, be described as habitual contemplations of the first passive synthesis, for instance as lightwaves hitting the retinas of my eyes. However, the images are also produced by means of algorithms that regulate and strictly control the decoding of the data, and the images contemplated in my eyes/brain are further processed by means of social conventions, such as being connoted on the basis of semiotic fields of identity and gender (Foster, 1998). Eventually, I have written down my analysis of BIPED in the form of a text, which became a source for series of additional reflective practices of my initial observations of BIPED. Each stage of the above process is characterised by unique sets of systems of representation, operating at different levels of abstraction, and the meta-subject, *BIPED*-me, is partly constituted by all of the above elements. Hence, the various levels and degrees of duration in the meta-subject are always, from the cybernetic performative perspective, somehow mediated by systems of signification and abstraction.

A closer look at the processes performed through systems of representation shows another feature of the meta-subject, as some of the processes are partly reversible. What is encoded may be decoded, or recoded, and a moving image on a screen may be frozen, or reversed. The data strings that are transformed into images of humanoids during a performance of *BIPED* do not lose their actuality when they become part of a durational present of a conventional subject, just like the data files of video recordings or the textual representations of *BIPED* that were developed during my research. The actuality of a text or a data string may be revisited any number of times, each instance corresponding to a different and unique duration of lived experience, from the perspective of the conventional subject. However, from the perspective of the metasubject, the revisiting of a text or data string generates a duration of a hybrid character, where one part of the duration cancels out its own virtual structure as it becomes a past present, whilst another part of the duration maintains its presence. A similar situation occurs in relation to the duration of *BIPED*, which may be seen as an actualisation of an ordinal series emerging from the singularity corresponding to its touring schedule, as compared to the ordinal series of my visit to the theatre, which is cancelled out during the live performance on the particular evening I was watching the piece. However, my ordinal series was not quite cancelled out, as it is still under the influence of the larger singularity that structures the seasonal tour of the work *BIPED*. It seems that it is difficult to say when one duration ends and another begins, as larger and smaller durations depend on each other.

Moreover, the reversibility of certain representations within the *BIPED*-me metasubject only appears as reversals in relation to a particular degree or level of duration. For instance, as I pause and reverse a particular section of a video recording of *BIPED* in order to look at it again, there is a partial reversal of my representation of time in relation to my observational practice, as I am able to repeat the decoding of the stored data as an identical image, and the strings of data are not affected, as they continue to have a presence both as P and as AB in my temporal cone. However, the repetition of the decoding of data as images on a screen is not a repetition of my present as a subjective being, as the conventional subject represents the repetition of data decoding in the form of two different past presents. On the other hand, looking at the presence of the data strings, they do not have an unlimited endurance in the actual. As everything that exists in the realm of the actual, the data strings are in the process of cancelling out the intensive ordinal asymmetries that structure their being in the virtual.

It appears that the temporality and duration of the meta-subject is a highly complex situation, where more and less contracted durations merge into one another, weaker singularities become engulfed by stronger, and ordinal series of various lengths converge and diverge in intricate virtual patterns. The difficulty in reading the meta-subject in terms of the temporal is that it does not have a singular temporality, but is a composite of temporalities, and depending on from which level or degree of temporality that the meta-subject is approached, temporal and spatial anomalies appear, such as discontinuous space and symmetric, reversible time. This is precisely the fragmented viewpoint of Haraway's (1997, p. 4) cybernetic characters, which transgress the boundaries of subjects and objects, the natural and artificial, imploding time and space, and are being "transported through science-fictional wormholes to

emerge as something quite other". But what, then, is that "other" of temporal duration, stated in terms of abstraction?

III. Structuring the cone of abstraction

Owing to the fact that the cone of abstraction operates as a double to the cone of temporality, I will tentatively exchange Bergson's notion of a cone¹⁴ - divided into a top, S, corresponding to the absolute present/perception, and a base, AB, corresponding to an ideal past/memory - to a cone where the top consists of abstraction/perception. and the base, abstraction/memory. Within this structure exist all the different representations of the different durational experiences of the meta-subject: live performances of BIPED in theatres, representations of live performances as a video recordings, textual descriptions of the work, as well as all the memory-recollections made, based on any of the above representations of BIPED. The key element here is that they are all representations, but operating at different levels or kinds of abstraction, and in doing so, generating different kinds of durational temporalities, both of symmetric and asymmetric character, which in their turn become representations of a time arranged into pasts and presents which to some extent are exchangeable. A level of abstraction situated close to the tip of the cone, categorised by abstraction/ perception, would in many cases generate a temporality with much less symmetry than a level of abstraction close to the abstraction/memory base. The reason why the tip of the cone typically could have less temporal symmetry than the base lies in the higher relative degree of Deleuze's passive synthesis, or habit, as I move closer towards the realm of perception, as opposed to the higher degree of active synthesis, or memory, closer to the base of the cone. Crucially, the cones do exhibit a close proximity, as they represent repetitions of each other, and the cone of abstraction cannot operate in isolation from the cone of temporality.

Because of the close correspondence between my suggested cone of abstraction and Bergson's (1908) cone, there is one more structural issue that needs to be addressed in relation to the cone of abstraction. This issue relates to the movement between the virtual and the actual. In Bergson's cone, the plane P contains all actualised matter, and the base AB, memory, corresponds in Bergson's concept to the virtual. Hence, in Bergson's cone, a movement between different levels of duration, upwards or

^{14.} See page 144.

downwards in the cone, does not correspond to more or less temporality, as a difference in degree, but to difference in kind between the virtual and the actual. There is a similar kind of division in Deleuze's reading of Bergson, where memory takes on the role of grounding time in the passive and active synthetic processes of contemplation. Deleuze's contemplation, on the other hand, consists of movements between the general and the particular and is integral to the process of differenciation (Deleuze, 1994, p. 209) of the actual from the virtual. While differenciation is progressive, the difference between the general and the particular is not a matter of more or less generality, but instead, just as in Bergson, a difference in kind:

"Rather than a difference in generality, however, this movement implies a difference in kind: rather than discovering the more general beneath the less general, we discover pure spatiotemporal dynamisms (the lived experience of the embryo) with regard to the constituted parts and qualities, beneath the morphological, histological, anatomical, physiological and other characteristics. Rather than going from more to less general, determination progresses from virtual to actual in accordance with the primary factors of actualisation" (ibid., p. 215).

If the cone of abstraction is to correspond to the movements that both Deleuze and Bergson identify in the cone stated in terms of time, then a movement within the cone would not correspond to different degrees of abstraction, as if something was more or less abstract, but instead, there would be different kinds of abstraction. More specifically, abstraction could be of a virtual kind or of an actual kind. In identifying a movement between difference of kind in terms of abstraction, the problems introduced by stating the problem of meta-subjective perception in time has reached a solution. For instance, the inability to intuitively divide certain representations in terms of time, as they appeared at multiple places in Bergson's cone may now be divided into kinds of abstraction. The anomaly of symmetric time is rewritten as representational processes of coding and decoding, and the reconfiguration of my entire past each time I perform an analysis of my observation could alternatively be understood as being an abstract actualisation, cancelling out yet another atemporal virtual structure of abstraction, linked only indirectly to the representation of a past/present timeline. Time, as it were, becomes an alternative view of the abstract.

I have proposed that all of my representations of *BIPED*, live performances, video representations, textual descriptive accounts, as well as memory recollections, are not

to be classified as being more or less abstract, but as abstractions differing in kind, in terms of being composites of the virtual and the actual. However, I have still not addressed specifically how this proposal would translate into an intuitive division of a duration into difference in kind between the actual and the virtual. From my particular meta-subjective viewpoint, attending a live performance is neither more, nor less abstract than, for instance, watching a video recording, reading a textual representation, or a retrospective and reflective intellectualisation of the performance based on memory-recollections. Instead, all the above situations differ in terms of the virtual/ actual, the question is: what is virtual and what is actual in relation to the intuitive perception of the abstract?

Spontaneously, it might seem as if the process of memory-recollection corresponds to the more virtual kind of abstraction, and that of perception to the more actual, due to the affinity between Bergson's cone and the cone of abstraction. However, it is worth remembering that Deleuze emphasises the totality which also is inherent in Bergson's philosophy, and, as I have demonstrated above, withdraws from a notion of more or less generality as a means of tracing the presence of the virtual. Instead, Deleuze (ibid.) argues: "Rather than going from more to less general, determination progresses from virtual to actual in accordance with the primary factors of actualisation". Thus, while an embryo, being in the state of individuation, may be seen as actualising a generality awaiting the process of further specification through differenciation. Deleuze emphasises that there is also a presence of "the embryo as individual and patient subject of spatio-temporal dynamisms, the larval subject" (ibid.). Thus, he liberates the virtual from any strong attachment to or structural coherency with Bergson's cone, giving way to other interpretations of how the virtual and actual kinds of abstraction relate to the temporal cone. In Deleuze's reading, actualisation is characterised by specific and organic differenciation, whereas the virtual corresponds to that which is differentiated by ordinal series and singularities. However, one unanswered question in relation to the cone of abstraction is: which representation of the abstract is more differenciated, as opposed to differentiated, perception or memory-recollection?

One suggestion as how to answer the above question, or to provide a solution to the problem as it is stated in terms of abstraction, is to argue that my representation of present/immediate sensory perception of *BIPED* is dominated by virtual abstraction, whereas my retrospective, analytical reflection upon *BIPED*, mainly consisting of

memory-recollections, would be of an actual kind. The main support for this suggestion lies in the strong presence of a process of organic differenciation (ibid., p. 209) during my retrospective analytical practices. For instance, it was only in a state of analytical reflection that I was able to discover that my representation of a perception of an oscillating movement by the female dancer, as she was advancing over the stage, could be represented as a generality, subject to further organic differenciation into the specific X, Y, and Z. As I first perceived the oscillating movement during a live performance in the theatre, X, Y, and Z, were present, but as largely unactualised ordinal series, existing as three instances of the innumerable larval subjects in the embryonic state of the performative constitution of the *BIPED*-me.

The identification of X, Y, and Z as larval subjects in the constitution of the metasubject brings out yet another facet of stating the problem in terms of abstraction instead of time. In my retrospective analysis of BIPED, I am not only replacing the temporal idea of a recasting of my entire past, but since my representation of X, Y, and Z is a differenciation (ibid., p. 209) of the larval subjects inherent to the oscillating movement, which in itself is a larval subject inherent to BIPED as a coherent choreographic work, I am not, during my analysis, cancelling my entire past experience of watching BIPED. The reason why my past remains as a representation of past presents is that in my analysis, I am not primarily concerned with differences of representations in, or of, time, but with differences between representations of different kinds of abstraction. In my representation of Z, Y, and Z, I am neither cancelling out a representation of a past perception of an oscillating movement, nor a representation of a present analysis of an oscillating movement, but I am instead, through the performance of a movement from the virtual towards the actual, tracing a diversion of a certain ordinal series in the spatium: the series departing from the singularity corresponding to the oscillating movement entered the region of the singularities corresponding to X, Y, and Z. My past remains, while the virtuality corresponding to my previous representation of a movement is cancelled, but only partially, as its ordinal series diverge into the territories of newly established singularities. As a consequence, each new reading, or interpretation, of a perception of a movement, is an actualisation of a unique virtual series; appearing in the form of a repetition of the movement where each successive reading changes the contemplated generality of my understanding of that movement which is represented. This understanding could, for instance, take the form of Foster's (1998) connotations of gender, based on the idea of a semiotic field surrounding the body, or related to the relationships between the limbs of the body.

(a) Virtual performativity

In the above identification of virtual and actual kinds of abstraction, it seems as if I in fact have come across one additional kind of performative, consisting of a citation of the movement of actualisation from the virtual to the actual. The existence of this new performative may be traced in the increasing levels of differenciation (Deleuze, 1994, p. 209) as the virtual abstract of duration is actualised, through practices of representation, towards analytical abstractions. as a result of representational activities. Throughout my discussion I have already given several examples of this virtual performative: The descriptions in Chapter Four of the female dancer's oscillating advance across the stage, and of the dance of the humanoids; the intellectualised division of the oscillating movement into X, Y, and Z;¹⁵ and the analysis of X, Y, and Z as contemplated particulars,¹⁶ synthetically constituting the generality of the oscillation of the female dancer. Indeed, the development of a macroscopic view of the metasubject, mapping out its various parts in space and time, corresponds to a citation of the movement of actualisation of the abstract virtual intuitive perception.

All of the above cases exemplify how my perception of *BIPED* contains a multiplicity of larval subjects, differentiated in the realm of the virtual abstraction, and involved in a continuous process of differenciation (ibid.). Each analysis stimulates the movement of actualisation of the abstract even further, to the extreme point where it may appear as if it were possible to subdivide a movement duration into smaller parts.

The new kind of performativity which constitutes the movement between the virtual and the actual of the abstract may be called "virtual performativity", owing to its strong relationship to the virtual realm, and in order to distinguish it form the abstract performative. The virtual performative is characterised by a shift from the differentiated to the differenciated (ibid.), and it is effectuated through representational practices. Using my model of performative sets in relation to the virtual performative, the Performance set could be applied to the performance of representational practices.

^{15.} See pp. 157-159.

^{16.} See pp. 163-170

most notably the representation of perception as a meta-subjective duration, the Symbol to the analysis and intellectualisation of those representations, and the Act to the movement in the realm of the abstract, which shifts the duration of subjective perception away from the intuitive and towards the analytical, coinciding with a passage from the virtual to the actual.

IV. Conclusion

In this chapter, I have detailed how Deleuze's concept of the virtual relates to my observations of *BIPED*. My earlier description of the dance in Chapter Four was revealed as an instance mainly consisting of organic differenciation, characterised by habit and the active synthesis of memory. Moving towards the realm of the virtual, it appeared as if my observation took on increasingly general characteristics. However, such a conclusion would not take into account the fact that all the particulars in the specific and organic differenciations were coexisting as larval subjects already on the level of the Idea, as ordinal intensive structures in the virtual stratum, corresponding to the differentiated totality of all my durations, of which some were differenciated into organic sense-perceptions in the actual.

One particular and problematic effect inherent in the process of actualisation, in relation to the temporal duration of the meta-subject, was identified in the cancellation of the virtual through the actual. As a response to this problem, I revisited my previously identified cone of abstraction, which were posited as a double to Bergson's temporal cone. Comparing Deleuze's reading of the Bergsonian intuition in the light of my performative meta-subjectivity and the duration of the abstract, I suggested that a cybernetic performativity cannot be comprehensively understood unless its duration is stated in terms of the abstract. Hence, I suggested a complementary rule to Deleuze's third rule of intuition: to state the problem of duration in terms of the abstract in addition to time.

Applying my modification of Deleuze's third rule of intuition to the duration of the meta-subject, it became clear that the cone of abstraction operates as an inversion to the temporal cone: an actual temporality corresponds to a virtual abstraction, and vice versa. However, the structuring of the cone of abstraction also gave way for the identification of a new class of performativity, the virtual performative. While I discovered this new kind of performativity in relation to my phenomenologically based investigation into perception, its full range of implications cannot be restricted to a

study based purely on perception and observation. Hence, in the next chapter, I will move beyond my current framework of meta-subjective perception, as the last phase of the liminal transformation inherent in the methodological structure of this thesis, and reaggregate my identity as a transformed individual subject: a choreographer and dancer inclined towards aesthetic embodied practices.

Chapter 7: Moving beyond perception

I. Introduction

As the last chapter of my discussion, I will here complete the liminal process and reaggregate my meta-subjectivity back into a conventionally embodied subjectivity, albeit in a transformed state. Part of this reaggregation consists of a critical look at certain weaknesses on the cybernetic performative constitution, such as its problematic epistemological status which to some extent suffers from a hermeneutic enclosure. The liminal phase of reaggregation, however, points towards an exit from the closed feedback system of the cybernetic performative, in that the newly constituted and transformed subject has gained the capacity to apply the notion of virtual performativity in a different way than the meta-subject: as a method rather than as a mode of perception. I will demonstrate this capacity by means of looking at three choreographic examples from William Forsythe's oeuvre, concentrating on particular poietic elements from the creative processes corresponding to the different pieces of work.

II. The meta-subjective identity crisis

With the identification of the virtual performative, it may seem as if I have achieved one of the central objectives set out in Chapter One, which is a cybernetic redistribution and transgression of boundaries: the performative, the virtual, and the abstract united in one heterogeneous, meta-subjective duration. However, the meta-subject is by no means an unproblematic position, and a closer examination would reveal its internal incoherence, which nevertheless were to be expected from the outset, owing to its liminal characteristics, situated on the thresholds and in between partially conflicting theoretical concepts. On example of such incoherence lies in the apparent incompatibility between Merleau-Ponty's (1962) reliance on the materiality and existence of a body and a world in the production of an objectified body image, versus the absence of any *a priori* body in Butler's (1993) interpellated performative subject.

One fundamental problem of my discussion of the meta-subjective is that it consists of an entirely introspective discourse. Every representation that triggers a resonance in the phenomenal field of a subject is incorporated into the meta-subject. This means that as I perceive *BIPED*, the work becomes an active agent in the performative constitution of the observing gaze, and consequently, there is a sense of a hermeneutic circle throughout my discussion: A viewpoint which is unable to look anywhere but at its own place. The problem is that of a subject, trying to verify, explain, and prove its own existence, solely by means of referring back to its very own being. On the other hand, how else does a subject prove its own existence to itself?

Moreover, the introspective perspective is partial and fragmented: cybernetic and liminal relationships between discursive theoretical formations which in a conventional context would not operate in close proximity. I have already mentioned the potential conflict between the postmodern gender-oriented theory of Butler (ibid.) and the essentialist tendencies in the phenomenology of Merleau-Ponty (1962). In addition, my study includes Deleuze's theory of the virtual (1994), which Butler (1993, p. 4) points towards as having a problematic relationship in relation to feminist scholarship, suggesting that certain feminist efforts to rethink the idea of nature as a set of dynamic interrelations has "for some produced an otherwise unlikely alliance with the work of Gilles Deleuze". Even within the field of performative gender studies there are fragmentations, which could be exemplified in that Foster's (1998, p. 169) discourse partly consist of a critique of Butler, in the sense that her "focus on reiteration stresses the repetition of acts more than the relationality among them". The relationality of body parts, on the other hand, is in Foster's development of non-verbal performativity absolutely crucial for the performance of connotative readings of gender, based on the semiotic field that in Foster's view surrounds the body.

The above exemplified partial and fragmentary incoherency between the various fields which are included in my discussion means that the voice of the meta-subject, which through this thesis tries to validate its capacity to speak as a transformed conventional subject, could analytically be deconstructed and broken down into its incoherent and paradoxical components, demonstrating the very impossibility for a meta-subject to have a voice, viewpoint, or theory at all. However, this fragility of the theory/practice/ ontology of the thesis at the same time exemplifies the precarious state of Haraway's (1991) cybernetic characters, questioning traditional discursive values through their blasphemous behaviour, staying true only to their desire to transgress and pollute boundaries. However, the apparent weakness inherent in the paradoxical fragmentation

of the cybernetic identities is also the condition of its existence, bringing me back once again to the above problem of being caught in a closed hermeneutic circle.

There are ways of breaking the apparent closed feedback loop of the thesis. Crucially, the hermeneutic circle is an effect based on the particular methodological structure of the thesis, where the theory and practice are intertwined as being instances of each other. Hence, a different perspective may be acquired by shifting the methodological viewpoint to a position where the theoretical investigation does not correspond to its practice. One example of such a method would be to pursue the question asked by Butler (1993, p. 31), "what is the status of this 'outside'?" relating to the possibility of identifying an existence outside the realm of the symbolic concept. Since the metasubject is performatively constituted around the double characteristics of the Sign, the ontology of the meta-subject is most intimately dependent on its capacity of representation/coupling. Addressing the cybernetic performative outside the concept would mean either that the representation somehow would have to be separated from the phenomenal field of a perceiving subject, so that there could be a sense of separation between the theoretical viewpoint, the practice of observation, and the object being observed. However, such an approach would introduce additional methodological problems. Primarily, any viewpoint that distinctively and irrevocably positions itself outside the concept would, from a scholarly perspective, have to face the challenge of articulating its own agenda in a self-reflexive manner, and doing so without having any access to lived, embodied experience, as far as it is grounded in the phenomenal field. However, how could any self-reflexive investigation by an embodied subject separate itself from its own field of perception? At its best, such an approach would mark the return of disembodied discourse, as to some extent has been the case in anthropology and sociology in the past.¹⁷ At its worst, it would render any symbolic concept or representation meaningless, as it would lack a phenomenological grounding, and hence constitute a removal of "that world which precedes knowledge, of which knowledge always speaks, and in relation to which every scientific schematization is an abstract and derivative sign-language" (Merleau-Ponty, 1962, p. ix).

An alternative way of formulating a viewpoint outside the realm of the concept could be to use a hybrid perspective, which addresses the status outside of the concept in an

^{17.} See page 26

indirect manner, still applying systems of representation. This appears to be Butler's aim, as she raises issues concerning "what bodies 'are" (Butler, 1993, p. ix), and the problematic status of agency in relation to the performative, interpellated, and gender inscribed body. However, to pursue such a hybrid approach, using symbols to address the realm outside, or beyond, the concept, would change the main focus of this thesis. Instead of concentrating on issues regarding the perception of dance practice and observation as performative Signs, my discussion would most likely have to shift towards a more general discussion on the limitations of language and the concept of the symbol, based on philosophical traditions offering a different set of epistemological approaches.¹⁸ Yet, there is in fact a strong presence of discursive hybridity inherent in my discussion: each Sign has a duality, constituting both a symbolic representation as well as providing a coupling for the establishment of a durational reverberation. Moreover, Deleuze's (1994; 2002) development of Bergson's concepts of duration, intuition, and the virtual, could be seen as providing a critical perspective that allows an observer to situate themselves outside the immediate perspective of the cybernetic performative, in the discursive realm of symbolic practices.

The alternative viewpoint offered by Bergson/Deleuze may be exemplified by means of my suggestions of complementing Bergson's cone with a cone of abstraction,¹⁹ and adding a complementary rule to Deleuze's third rule of intuition.²⁰ Both suggestions are entirely founded on a meta-subjective perspective, which could be emphasised by the fact that it is specifically and uniquely from the viewpoint of the meta-subject that, for

^{18.} One example of an entirely different approach could be Wittgenstein's (2001; Wittgenstein and Russell, 2001) philosophy, which has a complex relationship to language and to the concept of the inexpressible. For instance, proposition number seven in his *Tractatus Logico-Philosophicus*, stating that "About what one can not speak, one must remain silent" (ibid.), could be interpreted in a wide variety of ways, for instance as a critique on the limits of language, or as a performative paradox. In his later writings, published posthumously, Wittgenstein criticises his earlier work and develops the concept of "language games" (2001, p. 4), emphasising the ambiguous operations of language, syntax, and grammar: "Our investigation is therefore a grammatical one. Such an investigation sheds light on our problem by clearing misunderstandings away. Misunderstandings concerning the use of words" (ibid., p. 37). An application of Wittgenstein in relation to my research would, however, demand an entirely different approach towards language, logic, causality, and the entire philosophical tradition of logical positivism.

^{19.} See pp. 149-153

^{20.} See pp. 192-196

instance, the data strings of the humanoids in *BIPED* coexist at the plane P and the base AB in the *experienced duration* of a present. Hypothetically, if I were to step outside the perspective of the meta-subject, it is possible to argue that the claimed failure of Deleuze's intuitive method to divide the experience of the meta-subject into differences in kind was not a methodological failure. Instead, it could be posed as a failure of the meta-subject to apprehend the entire duration of the encoded data strings, in relation to other levels of duration. For instance, Deleuze (ibid., p. 32) highlights how Bergson's formulation "I must wait until the sugar dissolves", could be understood in a wider context:

"If things are said to endure, it is less in themselves or absolutely than in relation to the Whole of the universe in which they participate insofar as their distinctions are artificial. Thus, the piece of sugar only makes us wait because, in spite of its arbitrary carving out, it opens out onto the universe as a whole" (ibid., p. 77).

If the duration of the data strings was seen in relation to the duration of the universe as a whole, as opposed to the duration of the BIPED-me, then the temporal method of intuition would indeed divide duration into differences in kind according to Bergson's temporal cone.²¹ In this case, the data strings would pass from a material existence in P to a past in AB. Moreover, from such a universal perspective it also appears that the cone of abstraction would not be necessary at all, since each level, degree, and kind of abstraction could be ascribed to yet another form of temporal duration, simply not perceived as such from the limited view of the cybernetic performative. However, the question still remains how it would be at all possible to formulate a self-reflexive perspective that is able to account for "the Whole of the universe" (ibid.). Additionally, such a universal perspective would, from the viewpoint of the meta-subject, imply a conflation between the reality of the virtual and the notion of the possible, which according to Deleuze is classified as being "disastrous" (Deleuze, 1994, p. 212). The reason for such a conflation lies in the idea that from the durational perspective of BIPED-me, the disappearance of the data strings, represented as screen images of humanoids, from plane P in Bergson's cone, may only appear to the meta-subject as a representation of an anticipated future possibility. Hence, the notion of a temporal duration of the data strings in themselves, in which the data intuitively divides in kind

^{21.} See page 144.

between P and AB, neither forms a part of the virtual realm, nor the actual realm of the meta-subject. The temporality of the data strings is purely hypothetical, belonging to the imagination of the possible. As a meta-subjective duration, stating the problem in terms of the abstract, the hypothetical future of a representation is not part of my experienced reality.

The situation of the meta-subject, as a durational experience that states and solves its problems through the abstract, serves to once again bring Cassirer's notion of perception as a manifold to the surface (Cassirer, 1953). Mathematically, the notion of the manifold implies a statement that does not need to be restated, or embedded, in an extrinsic system containing a higher-level dimension, but is possible to be solved solely by means of its own intrinsic dimensions (Delanda, 2004, p. 12). The perception and experiences of the cybernetic performative could be compared to such a manifold, with the capacity to state and solve its own problems intrinsically. This is not to say, however, that an extrinsic view is superfluous, in case such a view could be efficiently formulated. However, in spite of its flaws, and for the purpose of representing embodied perception, and any subsequent analysis of that perception, the performative constitution of the meta-subject gives a deep insight into the durational differences between the intuitive and the analytical. Each durational representation, whether the performative Sign comprises a live performance, a text, a video capture, a motion capture, or a decoded representation of any other form of algorithmically encoded strings of data, corresponds to a certain level of differentiation/differenciation of the abstract, complemented by a counter movement in the temporal. Through the synthetic processes of memory and analysis, each particular present moment of subjective perception triggers a dynamic performative motion of both actualisation and virtualisation.

III. The phase of reaggregation

The added awareness of the dual movement linked to the virtual performative in the representation of a subjective perception of a duration does not only serve to give an added analytical and intuitive insight on the structure of the multiplicity which is constituted through my observation of *BIPED*, but it also highlights the dynamism and inherent tension of every representation of a durational perception of a Sign. For instance, an analytical approach - which from a phenomenological perspective introduces causative distortion through the transition-synthesis, linked to the secondary

act of attention (Merleau-Ponty, 1962, p. 30) - does not oppose or obstruct an intuitive approach, as if one were at the expense of the other. Rather, in the cone of abstraction, analysis is the necessary result of the actualisation of the virtual, as it is caused by the cancellation of intensive ordinal difference in the virtual realm. From the perspective of the dual abstract/temporal duration, the meta-subjective reverberation is neither distorted, nor cancelled by the performative process of analytical objectification of the phenomenal field, but instead, the reverberation transforms itself from a virtual abstraction to a virtual temporality. The cybernetic performative constitution is a dynamic process which always differs from itself, as it continuously shifts its virtual reverberation between the temporal and the abstract. For instance, in the actual present moment when I perceive BIPED and enter into a durational meta-subjective coupling, the reverberation takes place in the virtually abstract. The habitual synthesis of particulars, providing a foundation for the asymmetric characteristics of time, eventually causes that moment of duration to become represented to me as a recollection of a past present, available as an object for analytical practices. At that point in time, the reverberation in the virtual abstract has become completely transformed into a virtual temporality, which is contemplated through the passive synthesis of memory, and as such provides the very ground for yet another habitual foundation of a present moment of actual perception as temporal duration, causing the reverberating BIPED-me to once again transform itself into a virtual abstraction.

In the constitution of a cybernetic performative, every actualisation in terms of the temporal is accompanied by a virtualisation in terms of the abstract, and vice versa. One movement always feeds a counter-movement, to the effect that the cancellation of the virtual through an actualisation simultaneously generates new intensive ordinal structures in the complementary cone. Hence, in the meta-subjective *BIPED*-me, there is no final destination point where a perception has been analytically exhausted, but instead, an infinite creation of new durational representations: the actual conventional subject always returns, but always new, as if it continuously appeared in a reaggregated state from a liminal transformation. The embodied subject separates itself from the mundane in the perception of the Sign, transforms through the meta-subjective reverberation in the virtually abstract, and is reaggregated back to the actual as a temporal subject as it recollects its own duration. However, the liminal process of the conventional subject is immediate, absolutely coinciding with the non-causal, reverberating, dynamic performative re-constitution of the meta-subject. The

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reaggregation is not temporally distinct from the separation and the liminal state, but they are simultaneous, intuitively separated by different levels of abstraction.

(a) The temporal and the abstract: A state of interdependency

The method which I have used in order to identify the characteristics of the metasubjective duration is a process of cybernetic performative liminal transformation. In the case where this transformation does not take place, as I touched upon towards the end of Chapter Six, there is a risk that the actual abstract may be confused with the actual temporal representation of a future, either as a fact or as a possibility. All the various levels of encoded, decoded, and synthetic representations within the metasubject - data strings, algorithmic procedures, past presents, present pasts, habits, memories, conventional embodied subjects, movements, and gestures - exist as larval subjects within the passively contemplated generality of the virtually abstract: the pure reverberation of the cybernetic performative.

Moreover, the generality of the virtual abstraction coincides with the perceived actual representation of the temporally present duration, united in the dual process of denotation of and coupling through the Sign. However, unlike the virtuality of the temporal duration, the virtual abstraction does not arrive to ground the present as a synthesis of memory from the past, but rather, temporally speaking, it encompasses and pre-exists the present. This idea must not be confused with the concept of a future. For instance, looking at BIPED-me from a temporal perspective, it may seem as if the data strings of the projected humanoids not only exist during and after my actual perception of them, but that they also existed before that perception. A similar argument could be made in the case of the temporal characteristics of a reading of my textual descriptions of BIPED, but the notion of a future only exists as a dimension of the passively synthesised particulars of the absolute present. The virtual, both in its temporal and in its abstract sense, is characterised by timelessness, and the concept of data arriving from the future to a point in time when it is perceived can only exist as an analytical construct, as part of the actualising movement of the virtually abstract: the concept of the future is yet another a larval subject in the cybernetic performative reverberation.

The main point that I would like to emphasise in the above discussion is not the atemporal characteristics of the abstract, but is the idea that in order for the movement, data, images, or text to exist as representations of each other in the *BIPED*-me they first

have to be virtualised in the abstract as a reverberation. However, they cannot be virtualised unless they already are actualised, and hence the necessity for the simultaneous and oppositional movement of actualisation/virtualisation between the temporal and the abstract in the form of the representational/reverberating duality of the Sign. The abstract and the temporal are intimately intertwined and dependent upon each other.

The close interdependency between the temporal and the abstract does not mean that they cannot be analytically and intuitively treated as discrete entities, and that their complementary operations in relation to the virtual and the abstract cannot be extracted and utilised for an advancement of knowledge in relation to perception of dance. To the contrary, the double temporal/abstract characteristics of the reverberating meta-subject allows for a revised subjective notion of how I may perceive embodied dance movements. However, this revision in perceptive attitude towards movement is only apparent while I am in the liminal state constituted through cybernetic performativity. The question here is: what happens when I reaggregate from that liminal state to become once again a conventionally embodied subject, and to what extent is my discussion valid to a subject that does not transform in the cybernetic performative process?

Having identified the existence and operations of the virtual performative, it is possible to conceive that my investigation into perception of dance movement has implications that extend beyond the durational state of the reverberating meta-subject. Below, I will trace some of the major stages of my liminal transformation throughout this thesis, with the purpose of arriving to a state of reaggregation, a conventional subject, yet different, in my perception of dance practice as a practice of virtual performativity.

(b) Theory and method: The liminal states of transformation

Owing to the importance of constituting the liminal state in order to follow the argument of this thesis, the first chapter was focussed on the establishment of a viewpoint, formulated as a cybernetic transgression of conventional subjective boundaries, pointing towards the position of a cybernetic performative liminality. Chapter Two provided yet another preparatory step towards the liminal transformation in its exploration of vitalism, virtual theories on dance derived from the vitalist tradition. In the second chapter, I also looked at how Cunningham's choreographic practices have caused a sustained debate, lasting for decades, regarding the expressive

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and representational characteristics of movement. Moreover, in my discussion on his work *Story* (1963), I raised some initial questions regarding the relationship between performances of the work and the multiplicity of perceptions and interpretations of the audiences. With *Story*, Cunningham seemed to have suggested that the totality of readings of the work was an integral part of the work itself.

Chapter Three consisted of the first decisive step towards a transformation of subjective perception in terms of performativity. The chapter combined the phenomenological traditions of Cassirer and Merleau-Ponty with a close reading of Foster's non-verbal performativity. By means of comparing performative perlocutionary and illocutionary forces in relation to Merleau-Ponty's concept of phenomenal and objective body images, and Foster's suggestion of gender-constituting semiotic connotations based on choreographic movements, I derived the notion of the abstract performative. A further investigation into the specific operational structure of the abstract performative lead me to the idea of the double function of the Sign, acting both as a symbolic representation and as a coupling agent, a nexus point which establishes a pre-objective phenomenal reverberation which dynamically transforms the embodiment of the perceiving subject.

In Chapter Four, I explored in further detail the various actual elements which the Sign brings into resonance. Based on my observations of BIPED, I developed a more comprehensive picture of the abstract performative, which in this more extended sense of subjective constitution was described as a cybernetic performative meta-subject. The identification, or representation, of my embodied and subjective durational perception as a reverberating meta-subject was one of the key transformations in the liminal process of the thesis as a whole. The main reason why the transformation from the conventional subject to the meta-subject has such a crucial role lies in their internal difference, which is revealed in how they respond to the method of intuition. Intuition, in Deleuze's view, is the method by which the composite of a perceived duration may be divided into its virtual and actual differences in kind. As I applied intuition to the meta-subject, it did not result in a satisfactory division: the virtual did not appear as distinct from the actual. The cause of the problem seemed to be rooted in the reverberation established through the Signs within the meta-subject. The reverberation did not comply with the conventional temporal structures of a subjective duration as divided into memory and perception, but instead, the reverberations seemed to be more closely linked to the various levels of abstraction corresponding to the Sign in its role as a non-representational cybernetic performative interface.

In order to more comprehensively understand how the virtual would operate in relation to my proposed cone of abstract duration, it seemed necessary to look more closely at the notions of difference and repetition, which play a major role in Deleuze's reading of Bergson's concept of duration. Hence, Chapter Five was largely dedicated to a discussion of how the meta-subjective duration may be understood in terms of repetition and difference. Additionally, I outlined an even closer affinity between the temporal and the abstract aspects of the cybernetic performative duration, developing in more detail my previous analogy between the synthetic grounding of time, as a present moment of duration with past and future dimensions, and the grounding of the reverberating meta-subject through the Sign.

The sixth chapter demonstrated how the process of actualisation moves in stages, and depending on where in relation to those stages the perceived duration is located, the differenciation of the actualities of the perception will be in a more or less larval state. The aim of Chapter Six was to identify precisely how the two cones of duration, the temporal and the abstract would relate to each other. My conclusion was that the abstract cone operates in an inverted state to the temporal, to the effect that any actualisation of the temporal is accompanied by a virtualisation of the abstract. Thus, as the temporal duration moves towards the increasingly differenciated actual, the abstract duration folds back towards the virtual state of differentiation. The implication of representing the meta-subjective duration as characterised by two oppositional movements between the virtual and the abstract is that neither the idea of an immediate experience of a perception in the present, nor a subsequent analysis of that experience is in its totality more or less virtual or abstract than the other. Instead, meta-subjective intuition is not only characterised by a division into difference in kind between the virtual and the abstract, but also between degrees of difference between the differences of the virtual itself. Further, the virtual appears to form an inverted double of itself, where each cancellation corresponds to a simultaneous reconstitution: fundamental difference as a process of always differing from its own difference.

As a derivative from the inverted relationships between the two cones, the abstract and the temporal, appeared the notion of virtual performativity, identified as a performative iteration of the movement between the virtual and the actual. However, since my discussion until chapter six was restricted to the durational state of the meta-subject, the implications of virtual performativity outside the activity of perception and observation have so far been limited. In addition to its role in relation to cybernetic performativity and perception, the virtual performative have the potential to serve as a tool in order to address, analyse, and understand choreographic practice. In order to apply the virtual performative outside the scope of meta-subjective perception, the liminal transformation had to be completed in the form of a reaggregation, and in that process, which started in this chapter, the meta-subject was revealed as suffering from a certain epistemological confinement: in itself, it is unable to look beyond its own constitution.

However, the introspective, circular characteristics of the meta-subjective viewpoint also serve the purpose of rooting its duration in the perception of a conventionally embodied subject, and hence, the meta-subjective mode of perception does not depend on hypothetical possibilities, but on the perceived reality corresponding to the dynamic temporal/abstract movements between the virtual and the actual. Every constitution of a cybernetic performative equals a liminal transformation which, due to its state of reverberation and the corresponding activity of the phenomenal performative series. continuously re-establishes the embodied conventions of the perceiving actual subject. Hence, the meta-subject appears as newly emerged conventional subject at any given time, as if it always just became reaggregated from a liminal state of transformation. The liminality of the meta-subject is itself a virtual abstraction in the process of being differenciated: liminality as a state of immediate reverberation between the states of separation, liminal transformation, and reaggregation. Those states are not separated by time, as, for instance, a past separation, a present transformation, and a future reaggregation, but like any meta-subjective reverberation, they have a temporal coexistence, or rather, they constitute a multiplicity of non-temporal durational composites of difference, within the cone of abstraction.

It is precisely in that continuously fresh condition of being in a state of liminal reaggregation from the meta-subject that I as a conventional subject am capable of applying the virtual performative to choreographic practice, as opposed to the perspective of audience observation and reflection. This application retains all the cybernetic, performative, and phenomenological features of the meta-subject, but they are transformed from providing the basis for a reading of a dance performance to an

insight into some of the poietic processes behind that performance. Those processes are, from the perspective of virtual performativity, understood as being citational and iterative, showing the characteristics of the performative, and in this case they would be citing the various stages involved in the abstract/temporal movements of actualisation/ virtualisation. This application of the virtual performative could be seen as analogous to Butler's performative inscription of gender on bodies, modulated as a performative inscription of particular temporal and/or abstract identity onto the choreographic process.

The shift in my discussion from the perspective of a meta-subjective state of duration to that of a reaggregated embodied subject looking at choreographic practice also marks a radical shift in my choice of object to observe. Instead of looking at Cunningham's finished work *BIPED*, I will direct my attention towards three partial instances of William Forsythe's (1999, CD-ROM) creative choreographic practices, as implemented in his work *Of Any If And* (1995), *ALIE/NA(C)TION* (1992), and *Eidos : Telos Part III* (1995). The purpose of this inquiry is not to perform a comprehensive study of how Forsythe's practices are steeped in virtual performativity. Rather, my aim is to give a few examples that suggests the idea that Forsythe's choreographic methods may be regarded as prototypes, or perhaps, proto-developments, of creative practices based on the principle of virtual performativity. This suggestion, in turn, is presented with the intention of pointing towards a vision of future choreographic practices which potentially could be based on the concept of virtual performativity.

The reason why I turn to Forsythe in this part of my discussion, as opposed to looking at Cunningham's poietic process behind the creation of *BIPED*, is partly rooted in the fact that Forsythe is a currently working artist, actively engaged in practical applications of his system of movement creation. This provides a foundation for future research on virtual performative choreographic practice, as the concept may be confronted with an ongoing process. Moreover, while Cunningham has left a legacy corresponding to a certain dance technique, arguably limited to a particular gamut of movements (Banes, 1994, p. 103), Forsythe does not explicitly advocate any particular set or collection of movements. Rather, he presents a collection of choreographic tools, which may be called "Operations" (Caspersen, 2000, p. 27) or "Improvisation Technologies" (1999, CD-ROM), and which may be adapted to produce a wide range of movements, varying both in form and expressivity, depending on how they are

implemented by a dancer or a choreographer. Hence, Forsythe's practices serves as a vital basis, or reference, for further research on virtual performativity, practically and theoretically.

IV. Forsythe and virtual performative choreography

The "Improvisation Technologies" developed by Forsythe (ibid., CD-ROM) consist of a versatile collection of choreographic tools for the purpose of generating and modifying movements. One of Forsythe's dancers, Dana Caspersen (2000, p. 27), talks in a similar manner about Forsythe's use of "Operations", which "is a term we use for a large set of procedures that Bill has been developing through the years and that we use constantly in choreographing and improvising. These procedures either modify or generate movement" (ibid., pp. 27-28). One example of such an Operation is described by Caspersen in relation to the creation of the duet Of Any If And (1995), when Forsythe instructed Caspersen and her dance partner, Thomas McManus, to use a method of movement creation referred to as "material collision" (ibid., p. 27). Material collision, she explains, consists of putting one dancer's movements or posture as an obstacle in relation another dancer's intention to move. Caspersen recalls her experience of using this method: "For example, Bill would ask us to collide specific sequences; I would try to do one while Thomas was doing another with his arm under my arm and his right leg between my legs. The resulting movements became duets" (ibid.).

The process of material collision could also be described as a kind of practical problem solving. In Ann Nugent's (2000) PhD thesis on Forsythe, Nugent emphasises how Forsythe's work has a very pragmatic character, where the dancer is focused on pursuing a purpose, rather than expressing some inner emotion or experience: "Thus the movement for the dancer is no longer one in which something of the inner being is linked to the creation of spectacle. The mind of the dancer is focused on a purpose" (ibid., p. 78). Material collision provides one example of how Forsythe focuses his dancer on a purpose, which is directly translated into a movement sequence. Forsythe also takes the idea of Operations with the purpose of solving embodied problems beyond the purely practical by applying concepts derived from mathematics to his work. In ALIE/NA(C)TION (1992), Forsythe used a method called "iteration", referring to the iterative mathematical process of "solving an equation, folding the results back into the equation, solving it again, etc" (Caspersen, 2000, p. 28).

The iterative process of ALIE/NA(C)TION, as described by Caspersen (ibid.), started with the creation of a multi-layered document, containing a mixture of fragmented texts, figures, shapes, numbers, and symbols. The graphical details of this document were used both to create basic floor maps for the dancers to move along, and as a source for the creation of volumes and lines that could be inscribed by bodies in the dance space. The initial movements were then examined, and Operations which modified the movement were added. The movements where re-represented, and once again. Operations were added. Each time that Caspersen and the other dancers moved through their sequences, originally based on the floor maps from the document, they recalled and examined their movements, which then were re-represented, in an embodied sense, by means of iteratively applying layers of Operations to their movement phrases. The actual content of the starting point is described as almost insignificant, as "The source material is only important in that its arbitrary, and often goofy, nature frees your mind to associate and to move among ideas" (ibid., p. 28). However, the details involved in the process of iterating the movements were crucial, and Forsythe was actively involved in the iterations in order to structure the development in particular ways, as Caspersen continues to explain:

"I continued expanding on the movement phrases using this algorithm: examining where I was, what I did, re-describing it, and folding the results back into the original material, lengthening the phrases with these inserts and repeating the process several times. Bill worked with us between versions pointing out places that needed expansion, re-direction, more clarity, etc." (ibid., p. 31).

The work *Eidos : Telos Part III* (1995), is yet another example where Forsythe used choreographic methods involving Operations that focused the dancers on the purpose of solving embodied problems. As part of the creative process, Forsythe developed a series of movement phrases, divided his company into smaller groups, and asked each group to modify the phrases, "using a counterpoint algorithm which Bill developed. The instructions of the algorithm consisted of four directions and four constraints" (ibid., pp. 32-33). The instruction for each algorithm, moreover, formed an ordinal series, so that the result of the first algorithm, "*orientation shift*" together with an "*isometry*" was to be fed in to the second, "*drop a curve*", the result of which is brought to the third, "*unfolding with inclination extension*", and sequentially, the fourth, "*internal analysis and extension*" (ibid.) [italics in original]. The four constraints, on the other hand, mainly affected the ordinal series in the sense that they

brought the series into temporal, spatial, and formal relationships to each other. Only one of the four constraints did not directly involve interaction between the dancers, for instance as alignment with others, waiting for others, and performing isometries of others' movements. The deviating constraint instead stated: "Change your orientation, in space and in time (rate of activity)" (ibid.), which, however, when applied, would affect all the other constraints.

The reading of Forsythe's work in terms of a citation of the movement from the virtual to the actual could be seen as complementing, for instance, Nugent's (2000) reading of Forsythe, where the choreography expresses, as it were, a certain purpose, or as in Caspersen (2000), methods of solving embodied/mathematical problems. For instance, in *Eidos : Telos Part III*, the algorithms could be read as the intensities constituting an Idea, structured as differential ordinal series. The constraints, on the other hand, bringing a dancer in certain relationships with other dancers, would be a performative citation, or iteration, of how the ordinal series converge or diverge with other series, as they are approaching the regions of other singularities.

During the iterative process of *ALIE/NA(C)TION*, the results of the solved equations are, repeatedly and accumulatively, fed back into the equations. This could be read as a performative citation of how the intensities of the virtual and the explicated extensities of the actual turn inside out and fold themselves into each other, so that they reach the very final stage of Deleuze's (1994) systems of simulacra, where "The *centres of envelopment* still testify to the persistence of the problems or the persistence of the values of implication in the movement which explicates and solves them [*replication*]" (ibid., p. 281) [italics in original]. From this perspective, the actual and the virtual never completely separate from each other, but continuously keep turning towards each other, trying to practically solve the problem iterates itself as the actualisation. From the perspective of abstraction, the problem iterates itself as the actualisation of the temporal coincides with the virtualisation of the actual, and hence, the virtual performative always performs a folding of the problem between the two counteracting movements.

The method of material collision, as explored in *Of Any If And*, could be explained as a performative citation of what the philosopher and author Manuel Delanda (2004, p. 18) calls a *"symmetry-breaking transition"* [italics in original]. In his reading of Deleuze,

Delanda sets up a close relationship between the study of "far-from-equilibrium thermodynamics" (ibid., p. 75) [italics in original] and the operations of singularities and ordinal series within the virtual realm. For instance, he describes how certain physical processes, such as the hydrodynamic flow patterns of water in the process of being heated up, suddenly reaches a certain internal threshold and undergoes a bifurcation, whereby the symmetries of the system change into new dynamic flow patterns (ibid., p. 19). According to Delanda, the changes in flow patterns of the water correspond to a phase shift, or a symmetry-breaking transition in terms of the structural arrangement of the singularities and the multiplicities of the intensive series in the spatium. Delanda's reading of Deleuze may be linked back to the material collision performed by Caspersen and McManus, where both dancers initially had their own movement sequences, or dynamic systems, actualising intensive orders of difference, corresponding to particular symmetric structures of singularities in the spatium. However, when the two dynamic systems were put in such a relation to each other so that they obstructed each other, the systems pushed each other beyond their respective thresholds, causing a "symmetry-breaking cascade of bifurcations" (ibid.). As the bifurcations in the spatium of each system rearrange the singularities and the extrusions of the original intensive series, the differenciated actuality of bodily movements changes accordingly and produces a duet, consisting of movements which are distinct from the two originating movement sequences.

The above examples do not aim to prove that Forsythe intentionally or explicitly cites or iterates the movements of actualisation or virtualisation, but rather to illustrate that it is possible to envisage choreographic practices, and critical interrogations of such practice, that would purposefully play with the notion of a virtual performative dynamism. Moreover, this particular application of the virtual performative is, in the context of my thesis, constituted at the methodological phase of exiting from the metasubjective reverberation. At the same time, that exit corresponds to a liminal reaggregation of a subjective viewpoint which operates in a temporal setting with a past, a present, and an anticipated future, yet without loosing sight of the processes of virtualisation and actualisation that occurs in the abstract. The difference from the meta-subjective viewpoint is that in this reaggregated state of subjectivity, I do not primarily see the virtual performative as being part of a durational experience of perception, but the concept potentially appears either as a critical tool which may be used to interrogate choreographic processes, or as a practical instigator for the purpose of creating dance movements: virtual performativity as a choreographic method in its own right.

V. Conclusion

The final arrival point of this last chapter addresses my research question, which asks whether the virtual performative may provide a framework for examining dance movement, not only from the point of view of audience perception and reflection, but also in relation to choreographic practice. The virtual performative, on the other hand, has been derived from an intuitive interrogation of abstract durations of the meta-subject, and hence, the answer to the question is intimately connected to the transformed state of the asking subject. While being in the cybernetic performative constitutive process, the virtual performative is a durational experience, but in the reaggregated state of a conventional subject, the virtual performatives. Just as gender may be performatively inscribed on a body, so may an aesthetic identity be performatively inscribed on a choreographic work. Alternatively, a choreographic process may be analysed according to which states of actualisation and/or virtualisation it is citing in relation to the temporal or the abstract.

The phase of reaggregation from the liminal state of cybernetic performativity also addresses the issues raised in relation to the identity of the meta-subject, as far as it is caught up in a hermeneutic circle, in the form of a closed, reverberating feedback loop. As I exit the liminal state of the meta-subject, my view changes from that of an atemporal reverberation in the virtual to a temporality where the various stages of virtualisation/actualisation appears as events distributed in space, time, and modes of representation, as exemplified through my references to Forsythe's practices moving through their various unique phases of stating and solving embodied problems. In my transformed and reaggregated state of subjectivity, I have a choice as to how I may apply the notion of virtual performativity: as a critical method of analytical inquiry, as a practical method of movement creation, or as a mode of intuitive perception. Hence, the virtual performative is an element of the meta-subject that also gives subjective access outside the realm of the cybernetic performative constitution, which only exists under the liminal condition. As a result, virtual performativity transcends its origins in the abstract and merges with the temporal. In a similar manner to the subject, which reaggregates from the liminal meta-subject, the virtual performative also transforms

from its function of constituting a particular state of abstract duration, to allowing itself to be at the service of the conventional subject in the form of a temporally based performative citation. Thus, the virtual performative forms a tool of iterative performativity which may be applied both for the purpose of liminal perception as well as analytical examination of choreographic practice.

Conclusion

This thesis set out to investigate relationships between perception and dance movements, relating to the concepts of virtuality, performativity, and abstraction. The aim of the research was to develop a particular mode of cybernetic performative perception which included a partial re-reading of my phenomenological sources, shifting the emphasis away from being a study of essences to become a study of the abstract, as a mode of subjective performative constitution related to the realm of the virtual. My basic research question asked whether the virtual performativity of the abstract, in addition to its role in relation to audience perception, could provide a framework for the purpose of examining contemporary choreographic practice.

There were three objectives in my study: First, to investigate the notion of expressivity or representation in relation to embodied movement; secondly, to develop a theory on perception that included the notions of the performative, the virtual, and the abstract, not only as a re-interpretation of the conventional understanding of each concept, but as concepts that are intimately and structurally related to each other; and thirdly, to relate the two above objectives to a distributed cybernetic performative state of being, during which the body transgresses its conventional organic boundaries and extends fragmentarily, not only in space and time, but also in levels of abstraction, such as sense-perception, memory, text, images, and algorithmic processes of encoding and decoding.

In addressing those aims and objectives, I have been advancing my discussion in seven distinct stages, corresponding to the seven chapters of the thesis. Structurally, the thesis was progressing along the three stages of Turner's liminality, or the liminoid, consisting of a phase of separation, liminal transformation, and reaggregation. In the first chapter, which established the framework for a separation phase, I outlined a non-conventional viewpoint, characterised by a fragmented cybernetic perspective, performatively constituted for the purpose of being capable of entering a liminal process of transformation. Hence, the first chapter provided the fundament based on which my third research objective could be achieved. In the second chapter, I addressed the first research objective, as I introduced certain problems in relation the vitalist tradition of understanding dance as inherently expressive, in comparison to Merce Cunningham's choreographic practices. I also started to address the second research

objective, as I included a discussion on how the virtual has been employed in dance analysis by Langer and Reynolds. This led me to the conclusion that the concept of the virtual has not been fully explored within the existing discourse about dance.

Chapter Three continued to advance my position in relation to all the three research objectives by means of establishing a relationship between performativity and phenomenology, giving rise to the notion of abstract performativity, grounded in the concept of the Sign. Hence, this chapter established a hybrid performative/ phenomenological model addressing the notion of expressivity of dance movements. However, the third chapter did not primarily contain a discussion based on direct perception of dance, rather it was based on second or third hand textual representations of movements. By means of grounding my discussion about perception on textual representations rather than a first-hand experience of a live performance, I was able to highlight the notion of the abstract in relation to my perception. This methodological choice emphasised Cassirer's notion of perception as always being related to a manifold, a composite which is always both mediated and direct and which cannot be approached directly. Following Cassirer's argument that perception and lived experience must be understood by means of the symbol, I introduced the concept of the performative Sign. The Sign was given the dual role of the manifold, operating both as a symbol and as a point of coupling between reverberating phenomenally lived experiences. Moreover, the Sign was also identified in relation to Deleuze's processes of synthetic contemplation, establishing a tentative framework which would allow me to integrate the notion of the virtual more fully in the subsequent chapters.

Chapter Four continued where Chapter Three ended, extending the notion of performative phenomenology, termed abstract performativity, into the concepts of the cybernetic performative and cybernetic performative interfaces. I also introduced a shift in the characteristics of the manifold of my perception by means of turning my attention towards the performance of Cunningham's *BIPED* (1999). However, keeping the composite structure of the manifold and the role of the abstract in my methodological focus, I represented two extracts from *BIPED* as textual descriptions based on a conflation between live experiences of the work and observations of video representations of the sections that were described. This conflation also allowed me to uncover how the Sign has the capacity of generating a reverberation across several different layers of representation and abstraction of embodied expression and

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experiences. As a result, I discovered the existence of a mode of lived experience that complemented Deleuze's reading of Bergson's model of duration as a temporally defined cone of perception and memory. This alternative mode of experience shifted the emphasis from the temporal to the idea of reverberating phenomenal fields, coupled together as layers of performatively constituted abstractions. Hence, I suggested the existence of a cone of abstraction that would complement Bergson's cone. The concept of the abstract also came to signify a crucial difference between perception based on the notion of conventional subjectivity, consisting of a body located at one particular place in time , and the perception of the meta-subject, which from a conventional temporal perspective could be described as an embodiment that is fragmentarily distributed over several bodies, places, modes and systems of representation, and temporal instances along a timeline extending from the past to the future via a present.

In Chapter Five, I continued to established the framework for a fuller integration of the concept of the virtual in my theory by means of turning my attention to the notions of repetition and difference. Based on my meta-subjective perception of BIPED, it initially seemed as if my reverberating experiences could be divided into smaller, analytical, and repetitive parts. However, a closer study of my impression of the divisibility of the movements revealed that it was not in reality the movements, or my experienced perception of the movements, that was divided, but my analysis instead corresponded to a production of difference. In fact, difference appeared to be at the very core of my durational experiences, both as a conventional subject and as a metasubject, but hidden underneath synthetic layers of Deleuzian contemplations, or generalisations of particulars. Hence, my experience of a lived present appeared not as a lived duration that is possible to divide into smaller parts, but as smaller parts that are asymmetrically and irreversibly synthesised into a representation of a perception. Moreover, I found that Deleuze's notion of synthetic contemplations were structurally analogous to my development of cybernetic performativity, which in turn constituted the reverberating meta-subject. Hence, the groundwork was prepared to move on to a final and full integration between the concepts of the performative, the virtual, and the abstract in relation to my perception of dance movement.

Chapter Six corresponded to the final stage of my liminal transformation, just prior to the phase of the reaggregation. In this chapter, I combined the three objectives in order to reach for my central aim, which at this point in my thesis could be condensed to the idea of presenting a phenomenology of cybernetic performative perception of the virtual abstract. In order to achieve this aim, I had to clarify in more detail the meaning of the concept of the virtual in relation to my perception. However, since the virtual in the previous chapter had turned out to consist of fundamental difference, which always would differ from that which is represented, the realm of the virtual appeared to be inaccessible even for the symbol. Hence, I decided to approach the virtual by means of the analogies of the egg and the theatre as presented by Deleuze. Drawing on those analogies, I outlined how my experiences of BIPED could be explained in terms of a movement of actualisation of the virtual realm of difference. However, as I intuitively compared my durational experiences as a temporally based subject with my abstract durations as a meta-subject, I found that the two intuitive models of duration that I had discussed, Bergson's temporal cone and my cone of abstraction, were in an inverted relationship to each other. While the temporally based duration were in the process of actualising the virtual, the abstract duration moved in the other direction, performing a virtualisation of the actual. Based on the idea that a lived experience always would contain this oppositional, or complementary movement, I identified yet another category of performativity: the virtual performative.

Starting from the moment of discovering virtual performativity, Chapter Seven corresponds to the phase of reaggregation from the liminal transformation. Moreover, the shift from liminal meta-subjectivity to a transformed conventional subjectivity, coincides with a shift from an intuitive mode of enquiry grounded on reverberating phenomenal performativity in the virtual abstract, to an objectified and temporally based analysis of perception. To recapitulate the difference between the abstract and the temporal duration: Stated in terms of the abstract, the intuitive method reveals differences in kind where the temporally based intuition only gave differences in degree. For instance, from the viewpoint of a temporal duration, an embodied movement, a digitisation of that movement as encoded strings of data, and a decoded screen representation of that data differ in degree of abstraction, not in kind. They are all equally actual, and their differences only concern form, matter, and their symbolic and pragmatic values as representations or actual material manifestations. However, the intuitive division of the abstract duration of the meta-subject presents the movement, the data, and the image as composites which all differ in kind as unique mixtures of the virtual and the actual. In a similar way, a textual description of a movement is not, as it seems from the temporal perspective, a more abstract representation of a less abstract movement. Both the movement and the text are equally abstract, in fact, entirely abstract, but they have different levels of virtuality and actuality as durational composites. The same idea applies to a memory of a past dance performance. A recollection differs in kind, not in degrees of time, location, or authorship in relation to the original event of that performance. Moreover, in the abstract, a recollection of a memory does not cause a cancellation and a recasting of the entire virtual reality of that performance, as it would do in the temporal, but instead, the recollection as a perceived duration *is* the abstract virtuality, which already is recast and cancelled out by the pre-existing actuality of is corresponding past memory. Hence, the virtually abstract always differ from itself immediately, its difference pre-exists its own virtualisation as difference.

All the various levels of encoded, decoded, and synthetic representations within the meta-subject - data strings, algorithmic procedures, past presents, present pasts, habits, memories, conventional embodied subjects, movements, and gestures - exist as larval subjects within the passively contemplated generality of the virtually abstract: the pure reverberation of the cybernetic performative. However, those larval subjects cannot be virtualised unless they already are actualised, and hence the necessity for the simultaneous and oppositional movement of actualisation/virtualisation between the temporal and the abstract in the form of the representational/reverberating duality of the Sign. Both the virtual and the actual thus pre-exists each other, and depending on whether a duration is approached as a meta-subjective experience of reverberation in the abstract or a temporally structured experience of a lived present, one kind will appear as if it was more prevalent than the other.

The reaggregation in Chapter Seven takes the form of applying the virtual performative as a temporal actuality of objectified choreographic practices. Hence, the original research question is addressed through my proposition that the virtual performative, framed by my liminal transformation via the meta-subjective duration, may serve as a method for the purpose of examining contemporary choreographic practices as dynamic two-directional movement-process between the realms of the virtual and the actual, stated both in terms of the temporal and the abstract.

I. Challenges to my research

The main challenge to my research appeared at an early stage in my project, and relates to the methodological shift from a choreographically based practical inquiry to a theoretical inquiry. This shift in method was also accompanied by an apparent shift in my focus, seemingly moving away from issues regarding the creation of aesthetic embodied practices and interactive interfaces between bodies and machines, to problems surrounding issues of perception and observation. However, as my research progressed, it occurred that my project was indeed still essentially of a practical character, and that the problems I was addressing still concerned the constitution of subjective embodiment and interfaces between disparate systems of representation. Indeed, the methodological shift in my research may be represented not as much from practice to theory as from one mode of practice to another, and the form of the thesis from one mode of representation to another. Instead of solving problems regarding embodiment and interfaces as a choreographic representation of body/movement/ machine interaction, I was solving similar problems in the form of a liminal transformation of my own subjectivity, represented as a written text.

While engaging in the liminal process, I was facing yet another problem, related to the introspective gaze of the meta-subject. As discussed in Chapter Seven, the fact that the cybernetic performative reverberation encompasses everything with which it is brought into coupling, means that it appears as if there is no alternative viewpoint available outside of the meta-subject. However, as I discovered during my phase of reaggregation, the comprehensive characteristics of the cybernetic performative is only valid during its state of liminal transformation. Once a conventional subjectivity was reaggregated, a choice appeared in the form of the virtual performative: a lived experience may be understood either as a reverberation intuitively stated in terms of the abstract, or as a temporally based two-directional movement between the virtual and the actual, where the processes of actualisation and virtualisation may be accessed and manipulated as performative iterations of the movements.

A third challenge to my research could be formulated in the critique that my current approach has been rather narrow in scope, not allowing for a wider diversification of my methodology beyond the scope of the examples in my study: Foster's textual description of a female choreographer, two extracts from Cunningham's *BIPED* (1999), and three instances from Forsythe's poietic choreographic processes. However, this critique is only valid from the perspective of a temporally stated subjective duration. From the perspective of the cybernetic performative, on the other hand, there is indeed a vast richness and comprehensiveness belonging to the duration of the abstract. Speaking as a reverberating meta-subject, my durational experience not only to include algorithmic operations, processes of encoding and decoding, my entire history and past as a conventional, temporal, and embodied subject, Cunningham's entire oeuvre, and all the histories and pasts of all individual audience members that have ever seen any performance of Cunningham's work. Indeed, the range of actual abstraction covered in this thesis even stretches back to the audiences of Balthazar de Beaujoyeulx's work *Ballet Comique de la Royne* from 1581. Admittedly, many of the elements mentioned above belong to the unconscious realm of my meta-subjectivity and would normally not appear as actualities to my subjective perception of a temporally defined duration. Because of this disparity between the cybernetic performative viewpoint and the perspective of a conventionally embodied subject, a temporally stated actual diversification would indeed assist in validating the concept of the meta-subjective duration, in the cases where the perceiving subject has not transformed itself through a cybernetic performative liminal process.

II. Future research potential

The above critique regarding issues around the range of application and diversification of my current research project could serve as an instigator for future research on cybernetic and virtual performativity. Such research could include both a macroscopic mapping of the chosen subjects, as outlined in Chapter Four, an intuitive division of the duration of the meta-subject, as well as an analysis of their virtual performative characteristics, in terms of how the subjects iterates the abstract/temporal movementprocesses of virtualisation and actualisation.

The unique concepts I have developed in this thesis could be applied together with already established methods of dance analysis, for instance as in studying relationships between various strands, such as movement, bodies, costume, lighting, sound, and props, of a choreographic work as a whole, or several works by a particular choreographer, or by looking at an entire genre of dance. However, since a comprehensive study would have to include both a macroscopic mapping of the structural coupling of the meta-subject, as well as an intuitive division, the task is by no means trivial. The macroscopic method would need to locate all the various parts linked by the cybernetic performative interfaces in time, space, and as levels of encoded and decoded representations. Fundamentally, the macroscopic approach would have to precisely identify the locations and double operations of the performative Signs.

Another mode of research could be to formulate a choreographically based project, with the aim of fully exploring the practical capacity of the virtual performative to cite the temporal/abstract movements between the virtual and the actual for the purpose of dance creation. I have illustrated in Chapter Seven how a prototype of such an method could be traced in the work of Forsythe. However, a more comprehensive choreographic method would preferably have to be formulated, involving a practical mapping of the entire spectrum of stages in the performative movement between the virtual and the actual, both in the temporal and the abstract.

A research methodology formulated around the development of virtual performative choreographic practices would most likely move beyond the methodology employed in this project, consisting of a partial macroscopic mapping and tracing, as well as an intuitive division of the meta-subjective duration. Instead, the choreographic practice would be stimulated to enter into a reverberating state with the Sign, not just as a duration in relation to the practice of perception, but also in relation to the actual embodied movements and processes which manufacture the Sign itself as an object of representation available for perception. The prospect that seems to be at hand is a more multi-faceted understanding of how lived durational experience relates both to the perception and the creation of new choreographic practices.

Bibliography

Abu-Lughod, L. (1990). Can there be a feminist ethnography? *Women & Performance*, 5(1), 7-27.

Allen, M. B. and Isaacson, E. L. (1998). *Numerical analysis for applied science*. New York: Wiley.

Allsopp, R., Catalina Roman, A., Clow, C. et al. (2005). Metachoreological perspectives: William Forsythe's 'The Loss of Small Detail'. *LOSS PROJECT* Retrieved 28 October, 2006, from http://www.metachoreology.com/read/Index.

Althusser, L. (1964). Freud and Lacan. In On ideology (pp. 141-171). London: Verso.

Althusser, L. (1970). Ideology and ideological state apparatuses. In *On ideology* (pp. 1-60). London: Verso.

Althusser, L. (2008). On ideology. London: Verso.

Ambjörnsson, R. (1990). *Mansmyter: Liten guide till manlighetens paradoxer*. Stockholm: Fischer.

Ansell-Pearson, K. (2002). *Philosophy and the adventure of the virtual: Bergson and the time of life.* London: Routledge.

Aristotle. (1969). Physics (H. G. Apostle, Ed.). Bloomington: Indiana University.

Atlas, C., Blum, S., and Cunningham, M. (2001). *Merce Cunningham: A lifetime of dance*. On An American Masters Production [DVD]. USA: Winstar.

Austin, J. L. (1975). *How to do things with words: The William James lectures delivered at Harvard University in 1955* (2nd ed.). Oxford: Oxford University Press.

Bachelard, G. (1994). The poetics of space (M. Jolas, Trans.). Boston: Beacon Press.

Bachelard, G. (2000). *The dialectic of duration* (M. McAllester-Jones, Trans.). Manchester: Clinamen.

Badiou, A. (1992). *Manifesto for philosophy*. Albany: State University of New York Press.

Badler, N. I., Phillips, C. B., and Webber, B. L. (1993). *Simulating humans: Computer graphics, animation and control.* New York: Oxford University Press.

Bailenson, J. N., Beall, A. C., and Blascovich, J. (2002). Gaze and task performance in shared virtual environments. *The Journal of Visualization and Computer Animation*, 13, 313-320.

Bakhtin, M. (1984). Rabelais and his world. Bloomington: Indiana University Press.

Banes, S. (1994). *Writing dancing in the age of postmodernism*. Hanover: Wesleyan University Press.

Barba, E. (2009). International school of theatre anthropology. Retrieved 27 June, 2009, from www.odinteatret.dk/ista/ista.htm.

Barba, E. and Savarese, N. (Eds.). (2005). The secret art of the performer: A dictionary of theatre anthropology. (2nd ed.). London: Routledge.

Barbic, J., Safonova, A., Pan, J.-J. et al. (2004). Segmenting motion capture data into distinct behaviors. *Proceedings of Graphics Interface* 9 August 2005. Retrieved May, http://graphics.cs.cmu.edu/nsp/publications.html.

Bartenieff, I. and Lewis, D. (1980). *Body movement: Coping with the environment*. New York: Gordon and Breach.

Barthes, R. (1972). Mythologies. London: J. Cape.

Barthes, R. (1990). The fashion system. Berkeley: University of California.

Bate, J. (2003). Jonathan Bate enjoys a 300-year-old philosophy lesson: I feel therefore I am. *The Guardian*, May 24.

Bateson, G. (1987). Steps to an ecology of mind. New Jersey: Jason Aronson.

Baudoin, P. and Gilpin, H. (1989). Proliferation and perfect disorder: William Forsythe and the architecture of disappearance. *Il Disegno Che non fa il Ritratto (Theatre program: William Forsythe; Reggio Emilia Festival Danza)*, 2, 73-79.

Baudrillard, J. (1983). Simulations (Foreign agents series). New York: Semiotext.

Baudrillard, J. (1996). Simulacra and simulations. In M. Poster (Ed.), Jean Baudrillard: Selected writings. Cambridge: Polity.

Baudrillard, J. (2002). Screened out (C. Turner, Trans.). London: Verso.

Bell, D. and Kennedy, B. M. (2000). The cybercultures reader. London: Routledge.

Beloff, L. (2005). Art, real time and seven mile boots. Paper presented at the Wearable Futures, Newport.

Berger, C. (2006). Körper denken in Bewegung: Zur Wahrnehmung tänzerischen Sinns bei William Forsythe und Saburo Teshigawara. Bielefeld: Transcript.

Berger, J. (1972). Ways of seeing: Based on the BBC television series with John Berger. London: British Broadcast Corporation and Penguin Books.

Bergson, H. (1908). *Matter and memory* (N. M. Paul and W. S. Palmer, Trans. Reprinted 1988, 2002, 7th ed.). New York: Zone Books.

Bergson, H. (1946). *The creative mind* (M. L. Andison, Trans.). New York: Philosophical Library.

Bial, H. (Ed.). (2004). The performance studies reader. London: Routledge.

Birringer, J. (2005). *Performance on the edge: Transformations of culture*. London: Continuum.

Birringer, J. (2008). Performance, technology, and science. New York: PAJ.

Birringer, J. (2009). AlienNation. Retrieved 26 August, 2009, from http://www.aliennationcompany.com.

Bishko, L. (1992). Relationships between Laban movement analysis and computer animation. *Dance and technology 1: Moving Toward The Future*, 1-9.

Bolton, W. (2003). *Mechatronics: Electronic control systems in mechanical and electrical engineering*. Harlow: Pearson.

Bourdieu, P. (1990). The logic of practice. Cambridge: Blackwell.

Bradshaw, Y. W., Healey, J. F., and Smith, R. (2001). *Sociology for a new century*. Boston: Pine Forge Press.

Briginshaw, V. A. (1997). 'Keep your great city Paris!' - The lament of the empress and other women. In H. Thomas (Ed.), *Dance in the City*. New York: St. Martin's Press.

Briginshaw, V. A. (2001). Dance, space, and subjectivity. New York: Palgrave.

Brooks, R. A. (2002a). *Flesh and machines: How robots will change us.* New York: Pantheon Books.

Brooks, R. A. (2002b). Robot: The future of flesh and machines. London: Allen Lane.

Buchanan, I. and Lambert, G. (2005). *Deleuze and space* (I. Buchanan and G. Lambert, Eds.). Edinburgh: Edinburgh University Press.

Butler, J. (2003). Interview with Jim Butler: A future with robots? Retrieved 7 March, 2006, from http://www.intel.com/research/spotlights/jimbutler-2003.htm.

Butler, J. (1988). Performative acts and gender constitution: An essay in phenomenology and feminist theory. In H. Bial (Ed.), *The performance studies reader* (pp. 154-166). London: Routledge.

Butler, J. (1990). Gender trouble: Feminism and the subversion of identity. New York: Routledge.

Butler, J. (1993). Bodies that matter: On the discursive limits of 'sex'. New York: Routledge.

Butler, J. (1997). *Excitable speech: A politics of the performative*. New York: Routledge.

Butler, J. (1999). Subjects of desire: Hegelian reflections in twentieth-century France. New York: Columbia University Press.

Carroll, N. and S. Banes. (1983). Cunningham and Duchamp. In G. Celant (Ed.), *Merce Cunningham* (pp. 172-185). Milano: Charta.

Carter, A. (Ed.). (1998). The Routledge dance studies reader. London: Routledge.

Caspersen, D. (2000). It starts from any point: Bill and the Frankfurt Ballet. *Choreography & Dance Studies*, 5(3), 25-39.

Cassirer, E. (1953). *The philosophy of symbolic forms*. New Haven: Yale University Press.

Celant, G. (Ed.). (2000). Merce Cunningham. Milano: Charta.

Certeau, M. d. (1988). *The practice of everyday life*. Berkeley: University of California Press.

Chi, D., Costa, M., Zhao, L. et al. (2000). The EMOTE model for Effort and Shape. Paper presented at the SIGGRAPH 2000 Conference Proceedings, New Orleans.

Cho, Y. S. (2001). Dance and the new technology: Integrating dance and the new technology for live performance. *The Korea Journal of Dance Documentation*, 123-140.

Chorost, M. (2005). *Rebuilt: How becoming part computer made me more human*. Boston: Houghton Mifflin.

Clark, A. (2003). Natural-born cyborgs: Minds, technologies, and the future of human intelligence. Oxford: Oxford University Press.

Clark, T. (1997). Deleuze and structuralism: Towards a geometry of sufficient reason. In K. Ansell-Pearson (Ed.), *Deleuze and philosophy: The difference engineer* (pp. 58-72). London: Routledge.

Clifford, J. and Marcus, G. E. (Eds.). (1986). Writing culture: The poetics and politics of ethnography. Berkeley: University of California Press.

Clynes, M. E. and Kline, N. S. (1960). Cyborgs and space. Astronautics, September, 29-33.

Cohen, S. J. (1974). Dance as a theatre art. New York: Dodd Mead.

Cohen, S. J. (1981). What does the dance of the sugar plum fairy "mean"? *Dance Chronicle*, 4(3), 279-296.

Conway, F. and Siegelman, J. (2004). Dark hero of the information age: In search of Norbert Wiener, the father of cybernetics. New York: Basic Books.

Copeland, R. (1979). Merce Cunningham and the politics of perception. In G. Celant (Ed.), *Merce Cunningham* (pp. 142-163). Milano: Charta.

Copeland, R. (2004). *Merce Cunningham: The modernizing of modern dance*. London: Routledge.

Copeland, R. and Cohen, M. (Eds.). (1983). What is dance? Readings in theory and criticism. Oxford: Oxford University Press.

Crary, J. (1990). Deleuze and structuralism: Towards a geometry of sufficient reason. Cambridge: MIT Press.

Croft, T. and Davison, R. (1999). *Mathematics for engineers: A modern interactive approach*. Harlow: Addison-Wesley.

Crossley, N. (1995a). Body techniques, agency and inter-corporality: On Goffman's relations in public. *Sociology*, 29(2), 133-149.

Crossley, N. (1995b). Merleau-Ponty, the elusive body and carnal sociology. *Body and Society*, 1(1), 46-63.

Crossley, N. (1996). Body-subject / body-power: Agency, inscription and control in Foucault and Merleau-Ponty. *Body and Society*, 2(2), 99-116.

Crossley, N. (2004). Phenomenology, structuralism and history: Merleau-Ponty's social theory. *Theoria*, 103, 88-121.

Csordas, T. (1994). Introduction: The body as representation and being-in-the-world. In T. J. Csordas (Ed.), *Embodiment and experience: The existential ground of culture and self.* Cambridge: Cambridge University Press.

Csordas, T. (2004). Health and the holy in the Afro Brazilian candomblé. In H. Thomas and J. Ahmed (Eds.), *Cultural bodies: Ethnography and theory*. Oxford: Blackwell.

Cunningham, M. (1970). Choreography and the dance. In G. Celant (Ed.), *Merce Cunningham* (pp. 35-49). Milano: Charta.

Cunningham, M. (2006). Merce Cunningham Dance Company. Retrieved 28 October, 2006, from http://www.merce.org.

Damasio, A. R. (1994). Descartes' error: Emotion, reason, and the human brain. New York: Putnam.

Damasio, A. R. (2003). Looking for Spinoza: Joy, sorrow, and the feeling brain. Orlando: Harcourt.

Davies, E. (2001). Beyond dance: Laban's legacy of movement analysis. London: Brechin Books.

Delanda, M. (2004). Intensive science and virtual philosophy. London: Continuum.

Deleuze, G. (1990). The logic of sense. New York: Columbia University Press.

Deleuze, G. (1993). *The fold: Leibniz and the baroque* (T. Conley, Trans.). London: The Athlone Press.

Deleuze, G. (1994). *Difference and repetition* (P. Patton, Trans.). London: The Athlon Press.

Deleuze, G. (2002). *Bergsonism* (H. Tomlinson and B. Habberjam, Trans.). New York: Zone Books.

Deleuze, G. and Guattari, F. (1988). A thousand plateaus: Capitalism and schizophrenia (B. Massumi, Trans.). London: Athlone Press.

Deleuze, G. and Guattari, F. (1994). *What is philosophy?* New York: Columbia University Press.

Deleuze, G. and Guattari, F. (2008). Anti-Oedipus: Capitalism and schizophrenia (R. Hurley, M. Seem, and H. R. Lane, Trans. 2004 ed.). London: Continuum.

Dell, C. (1993). A primer for movement description: Using Effort-Shape and supplementary concepts (2 ed.). New York: Dance Notation Bureau.

Della, R., Michael. (1996). *Representation and the mind-body problem in Spinoza*. New York: Oxford University Press.

Derrida, J. (1973). Speech and phenomena: And other essays on Husserl's theory of signs (J. Wild and J. M. Edie, Eds. D. B. Allison, Trans.). Evanston: Northwestern.

Derrida, J. (1982). Signature, event, context (A. Bass, Trans.). In *Margins of philosophy* (pp. 307-330). Brighton: Harvester.

Derrida, J. (1988). Limited Inc. Evanston: Northwestern University Press.

Derrida, J. (2002). Of grammatology (G. C. Spivak, Trans.). Delhi: Motilal Banarsidass.

Dewsbury, J. D. and N. Thrift. (2005). 'Genesis Eternal': After Paul Klee. In I. Buchanan and G. Lambert (Eds.), *Deleuze and space* (pp. 36-60). Edinburgh: Edinburgh University Press.

Dils, A. and Albright, A. C. (Eds.). (2001). *Moving history / dancing cultures*. Middletown: Wesleyan University Press.

Ditton, J. (Ed.). (1980). The view from Goffmann. London: Macmillan.

Douglas, M. (1973). Natural symbols: Explorations in cosmology. London: Barrie and Jenkins.

Douglas, M. (2002). Purity and danger: An analysis of concepts of pollution and taboo (Routledge classics). New York: Routledge.

Downie, M., Eshkar, S., and Kaiser, P. (2009). The OpenEnded Group. Retrieved 14 September, 2009, from http://www.openendedgroup.com/.

Driver, S. (2000a). Nijinsky's heir: A classical company leads modern dance. *Choreography & Dance Studies*, 5(3), 1-7.

Driver, S. (2000b). The life, so far. Choreography & Dance Studies, 5(3), 9-12.

Driver, S., Midgette, A., Caspersen, D. et al. (2000). William Forsythe. *Choreography & Dance Studies*, 5(3).

Dusek, V. (2006). Philosophy of technology: An introduction. Malden: Blackwell.

Einstein, A., Lawson, R. W., Geroch, R. et al. (2005). *Relativity: The special and general theory* (R. W. Lawson, Trans.). New York: Pi.

Elias, N. (1982). The history of manners. New York: Pantheon Books.

Entwistle, J. (2000). The fashioned body: Fashion, dress, and modern social theory. Cambridge Malden: Polity Press Blackwell.

Entwistle, J. and Wilson, E. (Eds.). (2001). Body dressing. Oxford: Berg.

Featherstone, M. and Burrows, R. (1995). Cyberspace/cyberbodies/cyberpunk: Cultures of technological embodiment. London: Sage.

Featherstone, M., Hepworth, M., and Turner, B. S. (1991). *The body: social process and cultural theory*. London: Sage.

Feher, M., Naddaff, R., and Tazi, N. (1989). Fragments for a history of the human body. New York: MIT.

Fernandes, C. (2001). Pina Bausch and the Wuppertal Dance Theater: The aesthetics of repetition and transformation. New York: Peter Lang.

Figgis, M. (1996). William Forsythe - just dancing around? [Video tape]. London: Euphoria Films for Channel 4.

Filmer, P., Phillipson, M., Silverman, D. et al. (1972). New directions in sociological theory. London: Collier-Macmillan.

Finkelstein, J. (1991). The fashioned self. Philadelphia: Temple University Press.

Foerster, H. V. (2003). Understanding understanding: Essays on cybernetics and cognition. New York: Springer.

Forsythe, W. (1999). Improvisation technologies: A tool for the analytical eye. [CD-ROM]. Germany: ZKM.

Forsythe, W. (2009). The Forsythe Company. Retrieved 15 October, 2009, from http://www.theforsythecompany.de/.

Forsythe, W. and Caspersen, D. (2007). From a classical position: Featuring William Forsythe and Dana Caspersen. [DVD]. NVC Arts.

Forsythe, W. and Figgis, M. (2007). Just dancing around? Mike Figgis interviews William Forsythe: Featuring the Frankfurt Ballet. [DVD Documentary]. NVC Arts.

Foster, H. (1996). *The return of the real: The avant-garde at the end of the century*. Cambridge: MIT.

Foster, S. L. (1988). *Reading dancing: Bodies and subjects in contemporary American dance* (4th ed.). Berkeley: University of California.

Foster, S. L. (1998). Choreographies of gender. In E. Striff (Ed.), *Performance studies* (pp. 166-177). New York: Palgrave Macmillan.

Foucault, M. (1977). What is an author? (D. F. Bouchard and S. Simon, Trans.). In *Language, counter-memory, practice* (pp. 124-127). New York: Cornell University Press.

Foucault, M. (1988). The history of sexuality. New York: Vintage Books.

Foucault, M. (1994). *The birth of the clinic: An archaeology of medical perception*. New York: Vintage Books.

Foucault, M. (1995). *Discipline and punish: The birth of the prison*. New York: Vintage Books.

Fox, I. (2001). A fundamental difference between Kinetography Laban and Labanotation. Retrieved 28 October, 2006, from http://dancenotation.org/DNB/ theorybb/discussion18/18_01_Fox.html.

Fraleigh, S. H. (1987). Dance and the lived body: A descriptive aesthetics. Pittsburgh: University of Pittsburgh.

Fraleigh, S. H. (1999). Witnessing the frog pond. In S. H. Fraleigh and P. Hanstein (Eds.), *Researching dance: Evolving modes of inquiry* (pp. 188-224). London: Dance Books.

Fraleigh, S. H. and Hanstein, P. (Eds.). (1999). *Researching dance: Evolving modes of inquiry*. London: Dance Books.

Furniss, M. (1999). Motion capture. Retrieved 4 August, 2006, from http://web.mit.edu/comm-forum/papers/furniss.html.

Gajjala, R. (2004). Cyber selves: Feminist ethnographies of South Asian women. Walnut Creek: AltaMira.

Gallagher, C. and Laqueur, T. W. (1987). The making of the modern body: Sexuality and society in the nineteenth century. Berkeley: University of California.

Garrett, D. (Ed.). (1997). *The Cambridge companion to Spinoza*. Cambridge: Cambridge University.

Geertz, C. (1975). The interpretation of cultures: Selected essays. London: Hutchinson.

Geertz, C. (1980). Blurred genres: The refiguration of social thought. *The American Scholar*, 49(2), 165-179.

Geertz, C. (1983). Local knowledge: Further essays in interpretive anthropology. New York: Basic Books.

Geertz, C. (1988). Works and lives: The anthropologist as author. California: Stanford University.

Geertz, C. (2000). Culture, mind, brain / brain, mind, culture. In Available light: Anthropological reflections on philosophical topics (pp. 203-217). Princeton: Princeton University.

Geertz, C. (2002). An inconstant profession: The anthropological life in interesting times. *The Annual Revue of Anthropology*, 31(1), 1-19.

Geertz, C. and Micheelsen, A. (2002). "I don't do systems." An interview with Clifford Geertz (with Arun Micheelsen). Journal of the North American association for the study of religion, 14(1), 2-20.

Gibson, W. (1984). Neuromancer. New York: Ace Books.

Giddens, A. (1991). Modernity and self-identity: Self and society in the late modern age. Stanford: Stanford University.

Goffman, E. (1959). *The presentation of self in everyday life* (1969 ed.). London: Allen Lane.

Goodman, N. (1968). Languages of art: An approach to a theory of symbols. Indianapolis: Bobbs-Merrill.

Gould, T. (1995). The unhappy performative. In A. Parker and E. K. Sedgwick (Eds.), *Performativity and performance* (pp. 19-44). New York: Routledge.

Graham, E. L. (2002). Representations of the post/human: Monsters, aliens, and others in popular culture. New Brunswick: Rutgers University.

Graham, M. (1992). Blood memory. London: Macmillan.

Gratch, J., Rickel, J., Andre, E. et al. (2002). Creating interactive virtual humans: Some assembly required. 24 Nov. 2005. http://www.cis.upenn.edu/%7Ebadler/papers/x4GEW.pdf.

Green, J. and Stinson, S. W. (1999). Postpositivist research in dance. In S. H. Fraleigh and P. Hanstein (Eds.), *Researching dance: Evolving modes of inquiry* (pp. 91-123). London: Dance Books.

Grosz, E. (1995). Space, time, and perversion: Essays on the politics of bodies. New York: Routledge.

Grosz, E. (1994). Volatile bodies: Toward a corporeal feminism. Bloomington: Indiana University Press.

Guest, A. H. (1983). Your move: A new approach to the study of movement and dance. New York: Gordon and Breach.

Guest, A. H. (2004). Labanotation: The system of analyzing and recording movement. New York: Routledge.

Habermas, J. (2003). Technical progress and the social life-world. In R. C. Scharff and V. Dusek (Eds.), *Philosophy of technology: The technological condition, an anthology.* Malden: Blackwell.

Hackney, P. (1998). *Making connections: Total body integration through Bartenieff Fundamentals*. Amsterdam: Gordon and Breach.

Hall, E. T. (1976). Beyond culture. New York: Anchor Books.

Hall, E. T. (1990). The hidden dimensions. New York: Anchor Books.

Hansen, M. B. N. (2004). New philosophy for new media. Cambridge: MIT.

Hanstein, P. (1999a). From idea to research proposal: Balancing the systematic and serendipitous. In S. H. Fraleigh and P. Hanstein (Eds.), *Researching dance: Evolving modes of enquiry* (pp. 22-61). London: Dance Books.

Hanstein, P. (1999b). Models and metaphors: Theory making and the creation of new knowledge. In S. H. Fraleigh and P. Hanstein (Eds.), *Researching dance: Evolving modes of enquiry* (pp. 62-88). London: Dance Books.

Haraway, D. (1991). Simians, cyborgs, and women: The reinvention of nature. New York: Routledge.

Haraway, D. (1997).

Modest_Witness@Second_Millenium.FemaleMan©_Meets_OncoMouse[™]. New York: Routledge.

Haraway, D. and Goodeve, T. N. (2000). How like a leaf. New York: Routledge.

Harris, P. A. (2005). To see with the mind and think through the eye: Deleuze, folding architecture, and Simon Rodia's Watts Towers. In I. Buchanan and G. Lambert (Eds.), *Deleuze and space* (pp. 36-60). Edinburgh: Edinburgh University Press.

Hastrup, K. (1995). A passage to anthropology: Between experience and theory. New York: Routledge.

Heidegger, M. (1993). Basic writings: From being and time (1927) to the task of thinking (1964) (D. F. Krell, Ed.). San Francisco: Harper.

Helpern, A. (1999). The dance theatre pieces of the 1940s: A conversation with Jean Erdman and Erick Hawkins. *Choreography and Dance*, 5(2), 33-40.

Honda. (2005). ASIMO: The Honda humanoid robot ASIMO. Retrieved 11 April, 2005, from http://world.honda.com/ASIMO/.

Hughes, S. H. (1979). Consciousness and society. Brighton: Harvester.

Husserl, E. (1965). Cartesian meditations. Hague: Nijhoff.

Husserl, E. (1991). On the phenomenology of the consciouness of internal time (1893-1917) (J. B. Brough, Trans.). Dordrecht: Kluwer.

Husserl, E. and Gibson, W. R. B. (1931). *Ideas: General introduction to pure phenomenology*. London: Macmillan.

Husserl, E. and Nakhnikian, G. (1994). *The idea of phenomenology* (W. P. Alston, G. Nakhnikian, and G. Nakhnikian, Trans.). Dordrecht: Kluwer.

Ihde, D. (2003). A Phenomenology of technics. In R. C. Scharff and V. Dusek (Eds.), *Philosophy of technology: The technological condition, an anthology*. Malden: Blackwell.

Johns, J. (1975). I don't see the necessity... In G. Celant (Ed.), *Merce Cunningham* (pp. 166-169). Milano: Charta.

Jordan, S. (1979). Freedom from the music: Cunningham, Cage & collaborations. *Contact*, 20, 16-19.

Kam, V. (2005). Merce Cunningham in conversation with John Rockwell. *Stanford presidential lectures in the humanities and arts* Retrieved 28 October, 2006, from http://prelectur.stanford.edu/lecturers/cunningham.

Kline, M. (1972). *Mathematical thought from ancient to modern times*. New York: Oxford University.

Kostelanetz, R. and Anderson, J. (Eds.). (1998). Merce Cunningham: Dancing in space and time. New York: Da Capo.

Kozel, S. (2005). Immanent technologies: The creative relationship between dancers and responsive computer systems in live performance. Paper presented at the 20th International Academic Symposium: Contemporary Dances in reflections of Social Phenomena, Seoul.

Kuhn, T. (1962). *The structure of scientific revolutions*. Chicago: University of Chicago.

Kusse, B. and Westwig, E. (1998). *Mathematical physics: Applied mathematics for scientists and engineers*. New York: Wiley.

Laban, R. (1926). Choreographie. Jena: E. Diederichs.

Laban, R. (1947). Effort. London: Macdonald and Evans.

Laban, R. (1966). Choreutics (L. Ullmann, Ed.). London: Macdonald and Evans.

Laban, R. (1971). *The mastery of movement* (L. Ullmann, Ed.). London: Macdonald and Evans.

Laban, R. (1984). A vision of dynamic space (L. Ullmann, Ed.). London: Laban Archives.

Lacan, J. (1991). *The four fundamental concepts of psycho-analysis* (J.-A. Miller, Ed. A. Sheridan, Trans.). London: Penguin.

Lamb, W. (1965). *Posture and gesture: An introduction to the study of physical behavior*. London: Gerald Duckworth.

Lamb, W. and Watson, E. (1987). *Body code: The meaning in movement.* London: Princeton.

Lane, J. (2002). Reverend Billy: Preaching, protest and post-industrial flanerie. In H. Bial (Ed.), *The performance studies reader* (pp. 299-310). London: Routledge.

Langer, S. K. (1951). *Philosophy in a new key* (2nd ed.). Cambridge: Harvard University.

Langer, S. K. (1953). Feeling and form. London: Routledge and Kegan Paul.

Langer, S. K. (1957). Problems of art. London: Routledge and Kegan Paul.

Langer, S. K. (Ed.). (1961). *Reflections on art: A sourcebook of writings by artists, critics, and philosophers*. New York: Oxford University.

Latour, B. (1992). One more turn after the social turn. In E. McMullin (Ed.), *The social dimension of science*. Indiana: Notre Dame.

Lawlor, L. (2003a). *The challenge of Bergsonism: Phenomenology, ontology, ethics*. London: Continuum.

Lawlor, L. (2003b). Thinking through French philosophy: The being of the question. Bloomington: Indiana University.

Lee, J., Chai, J., Reitsma, P. S. A. et al. (2002). Interactive control of avatars animated with human motion data. *ACM Transactions on Graphics* 9 August 2005. http://graphics.cs.cmu.edu/nsp/publications.html.

Lefebvre, H. (1991). The production of space. Oxford: Blackwell.

Lesschaeve, J. (1999). The dancer and the dance: Merce Cunningham in conversation with Jacqueline Lesschaeve (second ed.). New York: Marion Boyars.

Levin, D. M. (1999). The philosopher's gaze: Modernity in the shadows of enlightenment. Berkeley: University of California.

Macann, C. E. (2002). Four phenomenological philosophers: Husserl, Heidegger, Sartre, Merleau-Ponty. London: Routledge.

Macaulay, A. (2009). Dissecting a dance: An analysis of Merce Cunningham's 'Biped'. Retrieved 2 September, 2009, from http://www.nytimes.com/interactive/2009/08/01/ arts/dance/20090803-merce-graphic.html.

Maletic, V. (1987). Body, space, expression: The development of Rudolf Laban's movement and dance concepts. Berlin: Mouton de Gruyter.

Mann, S. (1998). Humanistic Intelligence: 'WearComp' as a new framework and application for intelligent signal processing. *Proceedings of the IEEE* 20 Sept. 2005. http://www.eyetap.org/research/wearables/wearcomp/hi/.

Mann, S. (2003). Existential technology: Wearable computing is not the real issue! *Leonardo* 20 Sept. 2005. http://www.eyetap.org/papers/docs/ id_leonardo_36_1_19_0.pdf.

Martin, J. (1933a). From the modern dance: Metakinesis; extension of range; form and metakinesis. In R. Copeland and M. Cohen (Eds.), *What is dance? Readings in theory and criticism* (pp. 23-27). Oxford: Oxford University Press.

Martin, J. (1933b). The modern dance. New York: A. S. Barnes.

Martin, J. (1945). From the dance: Dance as a means of communication. In R. Copeland and M. Cohen (Eds.), *What is dance? Readings in theory and criticism* (pp. 22). Oxford: Oxford University Press.

Martin, J. (1946). *The dance: The story of the dance told in pictures and text.* New York: Tudor Publishing.

Masamune, S. and Mamoru, O. (2003). *Ghost in the shell*. [DVD]. Manga Entertainment.

Massumi, B. (1999). A user's guide to capitalism and schizophrenia: Deviations from Deleuze and Guattari. Cambridge: MIT.

Massumi, B. (Ed.). (2002). A shock to thought: Expression after Deleuze and Guattari. London: Routledge.

Matthews, E. (2002). The philosophy of Merleau-Ponty. Chesham: Acumen.

Mauss, M. (1973). Techniques of the body. Economy and society, 2(1), 70-89.

McMullin, E. (1992). *The social dimension of science* (E. McMullin, Ed.). Indiana: Notre Dame.

McNamara, J. (1999). Dance in the hermeneutic circle. In S. H. Fraleigh and P. Hanstein (Eds.), *Researching dance: Evolving modes of inquiry* (pp. 162-187). London: Dance Books.

McNay, L. (1993). Foucault and feminism: Power, gender, and the self. Boston: Northeastern University.

Merleau-Ponty, M. (1962). *Phenomenology of perception* (C. Smith, Trans. 1996 ed.). London: Routledge and Kegan Paul.

Merleau-Ponty, M. (1968). *The visible and the invisible, followed by working notes* (A. Lingis, Trans.). Evanston: Northwestern University.

Mitcham, C. (2003). Three ways of being-with technology. In R. C. Scharff and V. Dusek (Eds.), *Philosophy of technology: The technological condition, an anthology.* Malden: Blackwell.

Moore, C. L. and Yamamoto, K. (1988). Beyond words: Movement observation and analysis. New York: Gordon and Breach.

Morris, G. (Ed.). (1996). Moving words: Re-writing dance. London: Routledge.

Moustakas, C. (1994). Phenomenological research methods. London: Sage.

Mullarkey, J. (Ed.). (1999). The new Bergson. Manchester: Manchester University.

Mulvey, L. (1999). Visual pleasure and narrative cinema. In L. Braudy and M. Cohen (Eds.), *Film theory and criticism: Introductory readings* (pp. 833-844). New York: Oxford University.

Mumford, L. (2003). Tool-users vs. Homo Sapiens and the megamachine. In R. C. Scharff and V. Dusek (Eds.), *Philosophy of technology: The technological condition, an anthology* (pp. 344-351). Malden: Blackwell.

Mumma, G. (1975). From where the circus went. In G. Celant (Ed.), *Merce Cunningham* (pp. 262-279). Milano: Charta.

Negri, A. (2003). The savage anomaly: The power of Spinoza's metaphysics and politics (M. Hardt, Trans.). Minneapolis: University of Minnesota.

Negri, A. (2004). Subversive Spinoza: (un)contemporary variations (T. S. Murphy, Ed.). Manchester: Manchester University.

Ness, S. A. (1992). Body, movement, and culture: Kinesthetic and visual symbolism in a Philippine community. Philadelphia: University of Pennsylvania.

Nietzsche, F. W. (1956). *The birth of tragedy and the genealogy of morals*. New York: Doubleday.

Nietzsche, F. W. (1969). *Thus spoke Zarathustra* (R. J. Hollingdale, Trans.). London: Penguin.

Nugent, A. (2000). The architexts of Eidos: Telos: A critical study through intertextuality of the dance conceived by William Forsythe. Unpublished PhD, University of Surrey, Surrey.

O'Neill, J. (1972). Sociology as a skin trade: Essays towards a reflexive sociology. London: Heinemann.

O'Neill, J. (1975). *Making sense together: An introduction to wild sociology*. London: Heinemann.

Parker, A. and Sedgwick, E. K. (Eds.). (1995). *Performativity and performance*. New York: Routledge.

Penrose, R. (1991). The emperor's new mind: Concerning computers, minds, and the laws of physics. New York: Penguin Books.

Penrose, R. (1995). Shadows of the mind: A search for the missing science of consciousness. London: Vintage.

Pini, M. (1997). Cyborgs, nomads and the raving feminine. In H. Thomas (Ed.), *Dance in the city*. New York: St. Martin's.

Plato. (1971). Timaeus and Critias (H. D. P. Lee, Ed.). London: Penguin.

Plato. (1981). The Republic (H. D. P. Lee, Ed.). London: Penguin.

Pluth, E. (2004). How acts use signifiers. Journal for Lacanian Studies, 2(1), 18-33.

Pollard, N. S. and Reitsma, P. S. A. (2001). Animation of humanlike characters: Dynamic motion filtering with a physically plausible contact model. *Yale workshop on adaptive and learning systems* Retrieved 5 October, 2009, from http://graphics.cs.cmu.edu/nsp/publications.html.

Pollard, N. S., Hodgins, J. K., Riley, M. J. et al. (2002). Adapting human motion for the control of a humanoid robot. *Proceedings of the IEEE International Conference on Robotics and Automation* Retrieved 5 October, 2009, from http://www.cs.cmu.edu/~jkh/style/.

Preston-Dunlop, V. (1981). The nature of the embodiment of choreutic units in contemporary choreography. Unpublished PhD, University of London, Goldsmith's College, London.

Preston-Dunlop, V. (1984). Point of departure: The dancer's space. London: Preston-Dunlop.

Preston-Dunlop, V. (1998a). Rudolf Laban: An extraordinary life. London: Dance Books.

Preston-Dunlop, V. (1998b). Looking at dances: Choreological perspective on choreography. London: Verve.

Preston-Dunlop, V. and Sanchez-Colberg, A. (2002). Dance and the performative: A choreological perspective, Laban and beyond. London: Verve.

Rainer, Y. (1978). Theatre papers (P. Hulton, Ed.). Devon: Dartington College of Arts.

Rainer, Y. (1983). A quasi survey of some 'minimalist' tendencies in the quantitatively minimal dance activity midst the plethora, or an analysis of Trio A. In R. Copeland and M. Cohen (Eds.), *What is dance?* Oxford: Oxford University.

Rainer, Y. (1999). A woman who. Essays, interviews, scripts. Baltimore: Johns Hopkins University.

Rauner, G. v. (1993). William Forsythe, tanz und sprache. Frankfurt: Brandes and Aspel.

Ravetz, J. R. (1996). Scientific knowledge and its social problems. New Brunswick: Transaction.

Ren, L., Patrick, A., Efros, A. A. et al. (2005). A data-driven approach to quantifying natural human motion. *ACM Transactions on Graphics (SIGGRAPH 2005)*, 24(3), 1090-1097.

Reynolds, D. (2007). Rhythmic subjects: Uses of energy in the dances of Mary Wigman, Martha Graham and Merce Cunningham. Hampshire: Dance Books.

Rorty, R. (1991). Objectivity, relativism, and truth. Cambridge: Cambridge University.

Rubidge, S. (2000). Identity in flux: A theoretical and choreographic enquiry into the identity of the Open Work. Unpublished PhD, City University, London.

Rubidge, S. (2002). Digital technology in choreography: Issues and implications. Paper presented at the 17th Annual Symposium of the Dance Society of Korea, Seoul.

Rubidge, S. (2003). Sensuous geographies. Retrieved 22 August, 2009, from http://www.sensuousgeographies.co.uk/.

Sachs, C. (1937). *World history of the dance* (B. Schönberg, Trans.). New York: W. W. Norton.

Sanchez-Colberg, A. (1996). Altered states and subliminal places: Charting the road towards a physical theatre. *Performance Research*, 1(2), 40-56.

Savile, A. (2000). Leibniz and the monadology. London: Routledge.

Scharff, R. C. and Dusek, V. (Eds.). (2003). *Philosophy of technology: The technological condition, an anthology.* Malden: Blackwell.

Schechner, R. (1969). Public domain: Essays on the theatre. Indianapolis: Bobbs-Merrill.

Schechner, R. (1988a). Performance studies: The broad spectrum approach. In H. Bial (Ed.), *The performance studies reader* (pp. 7-9). London: Routledge.

Schechner, R. (1988b). Performance theory. New York: Routledge.

Schechner, R. (2003). Performance studies: An introduction. London: Routledge.

Schechner, R. and Appel, W. (Eds.). (1990). By means of performance: Intercultural studies of theatre and ritual. Cambridge: Cambridge University.

Schechner, R. and Schuman, M. (Eds.). (1976). Ritual, play, and performance: Readings in the social sciences/theatre. New York: Seabury.

Scheyer, E. (1970). The shapes of space: The art of Mary Wigman and Oskar Schlemmer. *Dance Perspectives*, 41, 1-48.

Schlemmer, O. (1972). *The letters and diaries of Oskar Schlemmer* (T. Schlemmer, Ed.). Middletown: Wesleyan University.

Schutz, A. (1967). *The phenomenology of the social world* (G. Walsh and F. Lehnert, Trans.). Evanston: Northwestern University.

Schutz, A. (1982a). *Life forms and meaning structure* (H. R. Wagner, Trans.). London: Routledge and Kegan Paul.

Schutz, A. (1982b). The stranger: An essay in social psychology. In M. A. Natanson (Ed.), *Collected papers* (pp. 91-105). Boston: Kluwer.

Schutz, A. and Luckmann, T. (1989). *The structures of the life-world: Volume II* (R. M. Zaner and D. J. Parent, Trans.). Evanston: Northwestern University.

Searle, J. R. (1981). *Expression and meaning: Studies in the theory of speech acts*. Cambridge: Cambridge University.

Searle, J. R. (2005). Speech acts: An essay in the philosophy of language. Cambridge: Cambridge University.

Sedgwick, E. K. (2003). *Touching feeling: Affect, pedagogy, performativity*. Durham: Duke University.

Sheets-Johnstone, M. (1978). An account of recent changes in dance in the USA. *Leonardo*, 11, 197-201.

Sheets-Johnstone, M. (1979). *The phenomenology of dance* (second ed.). London: Dance Books.

Sheets-Johnstone, M. (1999). Emotion and movement: A beginning empiricalphenomenological analysis of their relationship. *Journal of Consciousness Studies*, 6(11-12), 259-277.

Shepherd, S. (2004). Lolo's breasts, cyborgism, and a wooden Christ. In H. Thomas and J. Ahmed (Eds.), *Cultural bodies: Ethnography and theory*. Oxford: Blackwell.

Shilling, C. (1993). The body and social theory. London: Sage.

Siegmund, G. (2004). William Forsythe: Denken in bewegung. Berlin: Henschel.

Silver, J., Wachowski, A., and Wachowski, L. (1999). The Matrix. [DVD]. Warner.

Silverman, R. M. (1995). Baruch Spinoza: Outcast, Jew, universal sage. Middlesex: Science Reviews.

Simmel, G. (1950). The stranger. In K. H. Wolff (Ed.), *The sociology of Georg Simmel* (pp. 402-408). New York: Free Press.

Stelarc. (2008). Stelarc. Retrieved 22 August, 2009, from http://www.stelarc.va.com.au/.

Stephenson, N. (1992). Snow crash. New York: Bantam Books.

Striff, E. (Ed.). (2003). Performance studies. New York: Palgrave Macmillan.

Sulcas, R. and Perron, W. (2006). The force of Forsythe: Not content with remaking ballet, the choreographer is pushing theatrical boundaries. *Dance Magazine* Retrieved February 7, 2007, from http://www.dancemagazine.com/dance_magazine/archived_issues/0406/

forsythe.php?PHPSESSID=c2a0dd7410d146ddb31c0e7ef1b7fb96.

Sutton-Smith, B. (1997). The ambiguity of play. Cambridge: Harvard University.

Thomas, H. (1995). Dance, modernity and culture: Explorations in the sociology of dance. London: Routledge.

Thomas, H. (2003). *The body, dance, and cultural theory*. New York: Palgrave Macmillan.

Thomas, H. (2005). Embodied discourses and qualitative social research on dance. Paper presented at the 20th International Academic Symposium: Contemporary Dances in reflections of Social Phenomena, Seoul.

Thomas, H. and Ahmed, J. (Eds.). (2004). *Cultural bodies: Ethnography and theory*. Oxford: Blackwell.

Todes, D. P. (2000). *Ivan Pavlov: Exploring the animal machine*. New York: Oxford University.

Trevino, J. A. (Ed.). (2003). Goffman's legacy. Lanham: Rowman and Littlefield.

Tseëlon, E. (1992a). Fashion and the signification of social order. Semiotica, 91(1/2), 1-14.

Tseëlon, E. (1992b). Is the presented self sincere? Goffman, impression management and the postmodern self. *Theory, culture and society*, 9(2).

Tseëlon, E. (1995). The masque of femininity: The presentation of woman in everyday life. London: Sage.

Turner, B. S. (1997). The body and society: Explorations in social theory (second ed.). London: Sage.

Turner, V. (1969). Liminality and communitas. In H. Bial (Ed.), *The performance studies reader* (pp. 79-87). London: Routledge.

Turner, V. (1982). From ritual to theatre: The human seriousness of play. New York: PAJ.

Turner, V. (1986). The anthropology of performance. New York: PAJ.

Turner, V. and Bruner, E. M. (Eds.). (1986). *The anthropology of experience*. Urbana: University of Illinois.

Vallee, R. (2001). Norbert Wiener. Retrieved 30 June, 2009, from www.isss.org/ lumwiener.htm.

Varela, F. J., Thompson, E., and Rosch, E. (1999). *The embodied mind: Cognitive science and human experience*. Cambridge: MIT.

Vaughan, D. (1989). Merce Cunningham. In G. Celant (Ed.), *Merce Cunningham* (pp. 92-99). Milano: Charta.

Vitanza, V. J. (2005). Cyberreader. New York: Pearson Longman.

Wachowski, A., Wachowski, L., and Kawajiri, Y. (2003). *The animatrix*. [DVD]. Warner.

Warwick, K. (2004a). I, cyborg. Urbana: University of Illinois.

Warwick, K. (2004b). March of the machines: The breakthrough in artificial intelligence. Urbana: University of Illinois.

Wechsler, R. (1997a). Computer in dance: Medium or tool? *Ballett International / Tanz Aktuell*, August, 30-32.

Wechsler, R. (1997b). O body swayed to music (and vice versa): Roles for the computer in dance. *Leonardo*, 30(5), 385-389.

Wechsler, R. (1998). Computers and dance: Back to the future. *Dance Research Journal*, 30(1), 4-10.

Wechsler, R. (2009). Palindrome. Retrieved 22 August, 2009, from http://www.palindrome.de/.

Welton, D. (Ed.). (1999). The essential Husserl: Basic writings in transcendental phenomenology. Bloomington: Indiana University.

Whitehead, A. N. (1922). *The principle of relativity with applications to physical science*. Cambridge: Cambridge University.

Wiener, N. (1961). Cybernetics, or control and communication in the animal and the machine. New York: MIT.

Wilson, E. (2003). *The philosopher and sociology*. New Brunswick: Rutgers University.

Wittgenstein, L. (2001). *Philosophical investigations* (G. E. M. Anscombe, Trans. third ed.). Malden: Blackwell.

Wittgenstein, L. and Russell, B. (2001). *Tractatus logico-philosophicus* (D. F. Pears and B. F. McGuinness, Trans. 1974 ed.). London: Routledge.

Yessios, Y. (2005). Asphalia, Inc. Retrieved 28 September, 2005, from http://www.yessios.com/asphalia/index.html.

Zizek, S. (2004). Organs without bodies: On Deleuze and consequences. New York: Routledge.

Zizek, S. (2008). The reality of the virtual (3/7). Retrieved 5 October, 2009, from http://www.youtube.com/

watch?v=uq2Cvji4MNU&feature=PlayList&p=BCAA00DDAB4B8B61&playnext=1 &playnext_from=PL&index=2.