PART A - The body moving through architectural space within the South African city

“The body articulates the world. At the same time, the body is articulated by the world” - Tadao Ando (Crabtree, 2006).

1. **The Relationship**

1.1 **City spaces**

City spaces can be described as the environment within which individuals and collectives live, work, play and experience the everyday. The city reveals the actions and reflects the needs of these individuals and collectives. It acts as the backdrop that facilitates the physical encounters that occur every day. The city represents, regulates and structures the body, influencing the way in which people move from place to place, between occupations or in social standing (Bunschoten, 2000: 155). It is made up of various disjointed experiences, which together make up the whole, and functions as a place of communication between people themselves and between people and their environment (Grosz, 2001:49 and Morojele, 2006). The complex relationship between the city and the body encompasses both physical and psychological components. The physical components of a city can be expressed through the connectivity between specific places (Bunschoten, 2000:26), whereas the psychological components of a city refer to remains that were significant in the past, such as artefacts and the memories of people (Misra, 2008).

The city comprises various spaces - visible and invisible, tangible and intangible, natural and man-made. The spaces of interest to this investigation are the ‘built spaces’ of the city; in other words, the architectural spaces. For the purposes of this document, the focus is placed on the South African city.

South African cities are rich in cultural diversity. They comprise many people of different ethnic backgrounds, ensuring a large range of various types of art - music, poetry, literature, painting and the performing arts. These art forms, together with everyday occurrences enhance the range for experience and broaden the possibility of encounters within city spaces (Hillier & Hanson, 1984 and Tschumi & Cheng, 2003: 112). Due to the exciting and dynamic nature of the South African city, the spaces within it provide the ideal setting for an investigation into the relationship (or lack thereof) that exists between the moving body and architectural space.

1.2 **The Configuration of Space**

1.2.1 **Society as creator**

Architecture is responsible for the configurations of space within which societies live, work and move. These spatial configurations can influence the movement of people within them, which in turn may influence the way in which the space is configured (Hillier, 1996: 31). The spaces that are created will have certain attributes and restrictions as a result of the activities taking place within them. These activities may include the acts of congregating in groups, individuals interacting with one another, as well as the acts of dwelling and occupying space (see page 19). The social relationships and information stemming from these activities will also place restrictions on the spaces (Hillier, 1996: 29 & 335). The identity of a society will therefore have a notable effect on the social relations occurring within these spaces, as well as the way in which the environment and its spaces are experienced (Morojele, 2006).
The “Minutes Project” is a film and research project focusing on the daily life in the city of Johannesburg, co-founded by Theresa Collins and Mocke Jansen van Veuren. Architects from the sharpCITY group approached them to participate in the South African representation at the 7th Architecture Biennial held in Sao Paulo, November-December 2007. They were to produce a film installation around the Biennial theme ‘Public and Private Space’. According to Mocke Jansen van Veuren, a lecturer in Multimedia at the University of Johannesburg, the city of Johannesburg is always in a “state of flux and has become a locus for research and engagement in many forms” (Jansen van Veuren. [S.a.]).

This communicates information regarding the use of space that can be analysed in socio-political and architectural terms. The time-factor is a constant theme throughout the documentation of the city and is measured by changes in light, as well as by the movement of people. Both of these factors contribute to the rhythms of the city that one would experience within these spaces over time (Jansen van Veuren. [S.a]). According to Jansen van Veuren the installation offered a contrasting reflection, “not on the planning and construction of public or private spaces, but on the transformation and appropriation of spaces and structures through their daily use, and through the presences and movements of people”.

The occupation of everyday spaces was illustrated in the films, ranging from “potentially hostile urban spaces, transitory spaces, the spontaneous or orchestrated occupation of spaces, signs denoting desires for the ownership of space, the mingling of lives in public recreational spaces, and the simulation of public spaces within privatised enclosures”. Jansen van Veuren states that these spaces are transformed in some way by the presence of humans within them, either by their gestures, or by their desires which can at times contradict the space and its pre-assigned function (Jansen van Veuren. [S.a]).

Time-lapse photography and experimental audio processes were incorporated to document the daily life in Johannesburg. The sounds and movements that are generated by the people, vehicles, goods and changes in light in and around these spaces and the structures within them leads to the development of a dialogue between the user and the space.

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Fig 3 Images from the Minutes Project (Available from www.uj.ac.za/multimedia/NewsandEvents/)

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THE MINUTES PROJECT

BY THERESA COLLINS AND MOCKE JANSEN VAN VEUREN

FOR THE 7TH SAO PAULO ARCHITECTURE BIENNIAL, 2007
1.2.2 [Moving body as creator]

The environment determines the movement of a person through it, but simultaneously a person can also determine the movement of an environment by interacting with it. A space that responds to the user can be deemed an interactive space. Such spaces enhance the user’s experience of his/her environment.

The environment is inhabited by the body. They share a particular dialogue caused by the body’s movement through its environment and the interaction leading from this (Bloomer and Moore, 1977: 57). Human movement can be described as the ability to articulate the body, a multi-sensory experience and the intentions of the body to create a physical or emotional space (Moen, 2006: v).

Spaces emerge as the body’s movements are revealed, thus movement is noted as the most dominant form of space use (Grosz, 2001: 116 and Hillier, 1996: 187). The body has the capacity to adapt to, and become integrated with its environment. It is able to achieve this due to its inherent openness and flexibility to and in its social context (Grosz, 2001:35). Space is a three dimensional entity. The body is also a three dimensional entity and can therefore create space through its movement. In this way the body becomes space, it reacts to the spaces around it and adapts to its environment. The spaces that are created are given rhythm and motion as a result of the gestures and movement within them. They are therefore transformed from static spaces into dynamic ones when imbued with human activity (Lefebvre, [S.a]).

The environment exposes itself to the possibility of spatial intervention as it is a dynamic entity that lends itself to change. The interaction of the body and its environment will change over time due to the fact that neither of them are static entities but are continuously changing, even if it’s on a non-visible level. These changes will have an effect on the movement, interaction and experience of the body in its environment.

TOP Fig 4 The movement of the body within the city spaces of Pretoria CBD
(Author, 2009)

BOTTOM Fig 5 Digitally manipulated images indicating static space and dynamic user (Author, 2009).

1.3 [Conclusion]

The city and its architectural spaces are static when compared to the dynamic movement of the human body within it. Even though movement possesses the ability to render space dynamic, there is a general lack of interaction between dynamic human movement and the spaces of the South African city. This lack of a dialogue between the two is augmented by the fact that we find ourselves within a constantly changing and evolving environment.
2. [Spatial Experience]

2.1 [Introduction]

“Movement, an activity which consumes time, is used to experience space” (Hillier, 1996: 233).

The physical environment and the social relationships within it will determine and influence the way in which the person will interact with, and experience, their environment. The environment cannot be experienced all at once, instead it is experienced in terms of the different spaces within it. The user needs to move through the individual spaces in order to experience the whole. Experience forms an integral part of the dialogue between architectural space and the body and is thus an important part of what must be investigated and addressed.

2.2 [Experience through movement]

“Experience is never limited, and it is never complete”

Henry James (Perkins, 1995)

People experience both public and private architectural spaces with their bodies as they are multi-sensory beings. By implication, they experience architecture with all their senses - hearing, touching, smelling and seeing. All these senses are specializations of the skin, which is essentially the organ with the sense of touch. The sense of sight is thus one of touch, as one ‘feels’ a space with one’s eyes. A multi-sensory experience relates to the concept of tactility (touch) (Pallasmaa, 2000). This ‘haptic experience of space’ can be explained using the analogy of the dancer - the dancer is trained to ‘feel’ space, which leads to the dancer and the space animating one another (Bloomer and Moore, 1977: 58). The movement of a person through space is not only a sensory experience, but can be likened to movement through time and memory.

The user’s experience and interpretation of space is influenced by their personal frames of reference in other words their memories of previous experiences and encounters (Bloomer and Moore, 1977: x). The encounters of people within space will lead to the experience of the space. This could give rise to possible participation as well as individual perceptions of the space, through personal memory. Movement triggers a kinaesthetic memory which flares in our moving muscles and thereby recalls other times of similar movement. This memory is caught in the preconscious, in the sensing organs, and in the muscles. This phenomenon is known as muscle memory and allows memory, images, and meaning to be encoded in our muscles (Moen, 2006:12). Certain images or memories of a previous action can trigger specific movements. The human body is able to perform an infinite range of movements, varying from defined to dynamically changing ones. This range of possible movements is informed and sometimes inhibited by the environment through which the body is moving (Bloomer and Moore, 1977: 59).

Architecture should respond to the body’s movement and subsequent experience of its spaces. The body’s spatial experience will influence the interpretation of the architectural characteristics (Bloomer and Moore, 1977: ix, and Crabtree, 2004). Architecture should immerse the body. This will encourage users to participate, engage and interact with the spaces they move through. Architecture can stimulate, evoke, manipulate, inhibit and capture the movement of the body through the environment. The influence of architecture may be to give pause in an environment based on movement and circulation (Tschumi and Cheng, 2003: 105). Architecture (and by implication design) can and should be used to create the dialogue between the body and space by manipulating the user’s movement through space.

Haptic – “relating to the sense of touch” (Thompson, 1996: 618).
2.3 [Affecting the users experience]

The majority of people moving in an environment pay little, if any attention to their surroundings. This is due to the fact that most of them have a pre-determined destination, which leads them to move specifically towards something, and allows for little exploration and experience of the environment they are moving through. The users’ experience will be intensified if they become more aware of the spaces they move through. This heightened awareness will in turn lead to an increase in exploration and possible interaction with the space.

There exists a hierarchy of spaces within a city environment, ranging from the intimate and often private interiors of buildings to the very public streetscape. As a result of this hierarchy, different levels of movement through an environment exist, thereby defining relationships between the different spaces (Hillier, 1996: 174). There is also a well-defined relationship between the movement of inhabitants and visitors. The movements of inhabitants have been adapted to the environment, whereas visitors, entering and leaving, will experience new restrictions and limitations to their movements. The layout of buildings within the environment and the circulation between them, as well as the activities taking place within (which includes the circulation of money, goods and information), may influence the user’s behaviour and movement (Bunschoten, 2000:422). If any of these factors are altered it will lead to a change in a person’s movement pattern. These changes in movement can be spontaneous or more choreographed. Elements, such as shading devices, urban furniture and the like, may also have an influence on movement. A change in movement will in turn bring about a change in the perceptions and interpretations of the user.

The user’s movements through space are inherently dynamic. The environment in which the space is situated consists of various rhythmic patterns which shift over time (Bloomer and Moore, 1977). The experience of the user will therefore alter as a result of the fact that the patterns of movement within an environment are dynamic and therefore invariably change direction and configuration (Hillier and Hanson, 1984: 144).

This notion is illustrated in Parenthesis, an installation that engages with the public and provokes reactions by influencing the existing movement pattern (Example see page 27). Another example of a public installation that enhances awareness and encourages participation is the “Cloud Gate” sculpture in Chicago. Its highly reflective surface captures and transforms the passers-by and their surroundings into a distorted panorama of reflections, which in turn challenge the perception of the surrounding space (Example see page 29).

2.4 [Conclusion]

It is clear that movement through space is linked to time and individual memory. Movement is also linked to spatial experience, which can be affected by altering spatial configurations. The ideal therefore, is to stimulate an active ‘dialogue’ between the user and space. This can be achieved by enhancing one’s awareness of a space, and thereby stimulating engagement with space. This interaction does not necessarily need to be physical, but can play out on sensory level instead. The ultimate outcome of any interaction with space would be a moment of pause, a moment where one could consider the space... This is the beginning of the dialogue between space and the body.

Fig 8 Configurational Maps depicting change in movement patterns, with change in spatial configuration (Hillier: 1996)
Description
Parenthesis is an installation that engages a dialogue with the public. Vranckx (2006) notes that the designers wanted to "provoke reactions by upsetting the strict guidelines and regulations dictated by a large city, by placing two arches in people’s trajectory. The people then had to decide whether to interact or not". Two arches were placed on a busy intersection. They graphically linked to the crosswalk markings on the ground, which slowly fragmented the closer they came to the arches. The exterior of the arches is made from polished stainless steel, giving a mirror like finish which causes the surrounding environment and the continuous movement to be reflected and multiplied. As pedestrians near these arches they need to decide to walk past or through them (Vranckx, 2006).

The project is explored with regards to human movement and the result of navigating through a space, where the user can decide on interaction or avoidance. The installation engages with the public and provokes reactions by influencing the existing movement pattern. Creating a dynamic space/object that has been informed by the dynamic movement of the public in a specific site.
“Cloud Gate” is a public sculpture designed by Anish Kapoor for Millennium Park, Chicago, constructed between 2004 - 2006. The sculpture is shaped like an ellipse and was inspired by liquid mercury. It measures 10 m x 20 m x 13 m, weighs 110 tons and is forged of a seamless series of 168 highly polished stainless steel plates. A network of steel structures on the inside of the elliptical shell ensures that the sculpture stays standing. This steel network was designed to expand and contract with the sculpture seeing that the area experiences extreme temperature fluctuations (Wikipedia_Cloud Gate. [S.a]).

“What I wanted to do in Millennium Park is make something that would engage the Chicago skyline...so that one will see the clouds kind of floating in, with those very tall buildings reflected in the work. And then, since it is in the form of a gate, the participant, the viewer, will be able to enter into this very deep chamber that does, in a way, the same thing to one’s reflection as the exterior of the piece is doing to the reflection of the city around”.

-Anish Kapoor (Millenniumpark. [S.a]).

The highly reflective surface of the elliptical shape captures and transforms the skyline, the surrounding cityscape as well as the passers-by into a distorted panorama of reflections which in turn challenge the perception of the surrounding space. The concave chamber beneath the sculpture, a 3.7m high arch, reflects images of visitors entering it from a wide range of angles. The artist, has referred to the sculpture as “a gate to Chicago, a poetic idea about the city it reflects”, with the name referring to the sculpture acting as some type of gateway that helps the viewer bridge the space between them and the sky above placing them in a state of “in-betweenness” (Wikipedia_Cloud Gate. [S.a]).
PART B – [Photography and Public Art]

1. [Photography – An analogy]

Architecture is used to create the dialogue between the body and space. However, as stated before, movement is dynamic and space is almost always static. To achieve a dialogue between the two, we need to view the moving body as a static element. We need to ‘capture’ movement in a moment. This process of capturing can be likened to the eye viewing a moment in time, or on a more practical level, to the process of capturing a moving element through photography.

2. [Overview of photography]

Photography can be divided into two groups, namely film and digital photography. Film photography can also be described as chemical photography, as the image is developed during a chemical process. Digital photography uses image sensors to record the image thereby creating an electronic data format. It is also a medium that can easily be manipulated and altered. Different types of photography include Architectural, Documentary, Fashion, Fine Art and Nature and Wildlife photography. Light is the chief resource and basis of photography, (Drew, 2005:110) and allows us to make the invisible visible.

According to the editors of Time-Life books (1970), the first known photograph, an image of a man leading a horse, was taken in 1825 by Joseph Nicphore Niepce. Eadweard Muybridge is one of the first scientists that applied photography to record and analyse the movements of humans and animals in 1887. It is stated that photography as an art form was not accepted into the art world easily as people argued that it was merely the reproduction of an already existing image (Wikipedia_Photography, [S.a]).

Photography-based art in South Africa has been dominated in the last thirty years by the notion of documentary photography in the country’s politically charged context, which in turn has informed the production of photography (Atkinson, 2000: 16 & 33). Documentary photography is the most prominent in the collective individual’s mind. This is as a result of the images delivered to the public by the media to act as visualisations of the events and people involved in activities that are regarded as being suitable for public interest (Drew, 2005:64).

3. [Relevance of photography to the project]

Photography not only acts as a way of recording events and moments, but can also be viewed as the recorder of the soul. Drew (2005: 84) and Atkinson (2000: 15) state that the camera is the device which capture moments of the everyday and reveal an individual’s psychological and emotional being. If the “eyes are considered to be the windows to the soul”, then one can like the lens of the camera to the recorder of the soul.

In many instances, the photographic image is seen to determine and inform the everyday lives of individuals and collectives within an environment. It reveals, records and communicates the surroundings by means of commercial advertising on billboards that can be viewed by a variety of people at the same time. Not only does it reveal, but it captures a moving movement. In other words, it renders a truly dynamic action as a static element. In a society that is continuously moving, the eye is also constantly moving. It is as if the eye is scared to engage in a static encounter (Atkinson, 2000: 41). Photography will ‘stop’ something that’s moving and suspend it in time (Drew, 2005:128). The photographic image allows the eye to engage with and experience a static encounters whilst moving through space, thereby making it possible to communicate happenings, the surroundings or even concepts to a constantly moving society.
These static moments have the ability to capture the attention of a user as they not only illustrate physical movement but also the expression, drama and meaning of an event or situation. They also provide visual records that will assist in shaping the memories of the users and their recollection of the past (Drew, 2005:70). The photographic image’s intriguing nature engages the senses, thereby causing the viewer to pause. As stated before, this may lead to interaction and a heightened experience of the space and its surroundings.

**IMAGE - HECTOR PETERSON**

This iconic photograph shows Mbuyisa Makhubo carrying the body of 12-year-old Hector Pieterson, shot by police on June 16th 1976, during the Soweto uprising. This image is brought to the public’s attention each year on Youth Day (June 16th), to act as a reminder of, and to commemorate the lives that were lost that day.

**IMAGE - WORLD TRADE CENTRE**

The terrorist attacks on the World Trade Centre (WTC) on 9th September 2001 (often referred to as “9/11”), filled the world with shock. These horrific images of aeroplanes flying into the twin towers of the WTC, which led to the collapse of both towers and the loss of thousands of lives, renders the event part of public and collective history. They also enable us to relive the tragic experience just by looking at them.

Such ‘historic’ images can facilitate a silent dialogue as they summarise a single moment or event which can support recollected memories of a time gone by. The passer-by (intended viewer) will interpret and experience images differently as a result of their individual frames of reference (Atkinson, 2000: 16). The narrative of each user’s life is arrested and broken into fragments as they move through a space. All these different fragments are gathered to make up a whole comprising disjointed experiences (Atkinson, 2000: 32). These fragments form part of the narrative of the everyday, where every user will experience the spaces differently.

Photography is thus applicable to this project for two reasons:
1. It possesses the ability to capture a fleeting, dynamic moment as a static object. It translates the image into memory and provides clues as to how one can create a dialogue between ‘the static and the dynamic’.
2. Photographic images have the ability to momentarily halt the user’s movement, allowing them to analyse, assess and possibly even interact with the not only the image but also the space it is situated in.

One possible way of integrating photography into the fabric of architectural space, is by applying it in the form of public art.
4. **Overview of public art**

According to (Public Art, [S.a]), public art refers to art produced in any media, which is viewed within the public domain. It should therefore be accessible to all the inhabitants within an environment. It should be specific to its context, and may encourage community involvement and participation. Contexts differ due to many factors, one being the diversity of the people (viewers) within it. The installation of art in the public domain can act as a catalyst for the improvement of the lives of individuals and collectives within an environment. It can also assist in the rejuvenation of spaces, and may provoke participation and interaction with its viewers. It may lead to the enhancement of the surroundings, making it more enticing to the inhabitants. Public art can also provide reference to the city and its specific socio-political, economic or environmental atmosphere at the time. It can create an awareness of art as a communicative tool, can address relevant topics and expose or inform the public about these issues. Conversations and debates may be evoked through public art, a process which can lead to the solving of problems (Wikipedia, Public Art, 2009). Different types of public art can be identified, the oldest being monuments, memorials and statues. Street furniture, lighting and more informal works like graffiti and murals, also form part of art in the public domain. Art forms such as dance and street theatre, and more ephemeral events, such as temporary installations and performances are also encapsulated under the umbrella of public art.

5. **Examples of public art installations in urban environments**

5.1 **Krzysztof Wodiczko – Animating public space through art**

Krzysztof Wodiczko, a Polish artist, generates art through the projection of images onto architectural facades thereby animating public space. Vallen (2005), states that Krzysztof reinterprets public space and “the changes in space that often remain in the participant and observer as a fragment of their inner and social lives”. His work intends to address miscommunication within society and to give suppressed individuals a space to voice their opinions and needs, and make themselves heard. The projections are ephemeral in nature and don’t last longer than two days at most.

The importance of his work is that the projections essentially create democratic places that evoke discussions and debates amongst individuals and collectives. The simple act of projecting an image onto a ‘dead’ façade creates a new space of value to the resident community. Vallen (2005) notes that the “controversial projections transform buildings and structures into memory that matters”.

Vallen (2005), states that this art work was produced in Madrid, Spain, just days after the outbreak of the first Gulf War in January 1991. The images were beamed onto the triumphal arch celebrating the victory of the fascist Generalissimo Francisco Franco in the Spanish Civil War. Wodiczko stated, "My work reveals the contradiction of the environment and the events actually taking place there. It has to do with the politics of space and the ideology of architecture. City centers are political art galleries" (Vallen, 2005).
“In 1987 the artist projected a controversial image onto the Martin Luther Church in Kassel, Germany, one of the few buildings to have survived the allied bombings of World War II. The artwork is of a person praying in a hazardous materials protective suite” (Art for a Change, 2005).

5.2 [Clive van den Berg – Public art in the South African urban environment]

Koseff (2009:54) asserts that Clive van den Berg has established himself as a “multi-disciplined cultural practitioner with an affinity for creating new and inventive art forms”. Van den Berg is part of the management team of the TRACE Group, which acknowledges the need for public art, and facilitates heritage and public art projects which focus on the political, social and natural heritage of the country. According to Koseff (2009:54), van den Berg wanted to escape from the notion of an enclosed gallery and saw the need to create work that could be viewed by a broader audience in a wider context. The only artworks that have been erected in the public domain in the past are the monuments and memorials honouring public figures from the colonial and apartheid eras. Van den Berg sees public art as something that should represent the entire nation and all its ethnic groups; communicating to them the rich history and heritage of the country, encouraging people to think about new possibilities in their future (Koseff, 2009: 54). One of van den Berg’s public art projects is the Gateway Public Sculpture, entitled Eland, located on the corner of Bertha and Ameshoff streets in Braamfontein, Johannesburg. This 5.5m high work; that was facilitated by the Johannesburg Development Agency (JDA), is intended to respond to the immediate environment and announces the entrance to the city. It reminds the people passing through Braamfontein of the natural environment that was once there (Koseff, 2009: 56).

The Johannesburg Development Agency (JDA) was initiated by the City of Johannesburg to stimulate and support area-based economic development initiatives throughout the Johannesburg metropolitan area. The JDA co-ordinates and manages capital investment and other programmes involving both public - and private sector stakeholders. Developments include the Greater Newtown Development, which is a regeneration program in the Johannesburg City centre (Johannesburg Development Agency, 2009).

PART C – [Conclusion]

It is thus clear that the human body’s ever changing movement through space can affect space, just as the configuration of the space can affect the human user. However, presently there is a lack of dialogue between the dynamic user and the static architectural environment. Movement through space is inherently linked to the user’s spatial experience; an aspect that can be changed by morphing space. An adaptation of the environment will result in an increased awareness of space, thereby creating a moment where spatial interaction is possible.

Photography can be used as an analogy for the theoretical problem. It provides clues as to how the dialogue can be initiated. When used as an ‘object’ in space it can create a momentary pause in movement, thereby creating an opportunity for interaction. Photography can be applied as public art in the urban environment. Public art as a regeneration and communication tool has been applied successfully throughout the world and recently in South African cities, specifically in the Johannesburg CBD.

The use of public art in Pretoria has not yet reached the same level as it has in Johannesburg - an aspect which this investigation will attempt to address. The author believes that public art, and in particular photography, the visual image, has untapped potential for the inner city of Pretoria. The theoretical discourse of the human body moving through architectural space will inform the design investigation to