

# GESTICULAR

[ Cena 1 – 11 ]



**Composition:**

Contrabass, Grand Piano, Violin, Xylophone, Mbira, Field Recordings, Computer Assisted Processing

**Composer/Researcher:**

Dimitri Voudouris  
[1961-]

**Composed:**

2006-2007

**Duration:**

73 min 15 sec

[ Cena 2 , 4 , 8 , 10 , 11]

Originally commissioned by **Projet In Situ** for the contemporary dance **Taxidermie**  
as art of the site specific project 4M [Maputo] with funding from

**The French Institute of South Africa**

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## Prologue

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The city a complex space built around history, cultures, architecture, economics, politics and many other environments that are not visible to the first time visitor. How does one even begin to understand the mechanisms by which a city, its people, its history and every other component that gives it its own unique identity.

Areas of communication that occur not only as tools by which different species give meaning to every day life in a struggle to survive, but rather that communication is pre-linguistic by nature, beginning at the point where memory fails and is routed in our subconscious the communication force that transcends time giving order and meaning to the past, the now and the indefinite future.

It is here where questions the tangibility of what is reality begins to make sense where animate and inanimate objects interdependent on one another are merely reflections of the self.

Such arguments became vital in my understanding of interrelationships between movement and sound and as a result helped me to create certain strategies in analysing gesture, motion, space and sound as a method in music composition.

## The socio-political and economic context of Mozambique

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### General Information

Mozambique is a Southern African country with an area of 799 380 sq divided into 10 provinces: Maputo, Gaza, Inhambane, Sofala, Manica, Tete, Zambezia, Nampula, Niassa and Cabo Delgado and Maputo City, which has provincial status. It borders with Malawi, Zambia, Zimbabwe in the west, Swaziland and South Africa in the south and Tanzania in the north. On the east, there is the coast of the Indian Ocean. The capital of Mozambique is Maputo.

The official language is Portuguese.

The total population according to the 1997 general census is 15,278,334, of whom 7,957,386 are women. Women represent 52,08% of the population and have the social and practical responsibility of ensuring that water is available at any cost to satisfy basic needs, such as cleaning and drinking.

### The Urban Scenario

The urban scenario has changed rapidly in Mozambique. Rapid urbanisation in recent decades, much of it a response to the protracted civil conflict, has placed a significant burden on Mozambique's urban infrastructure, housing, and institutional capacity. Close to 40 percent of the population now live in cities, about one-third of them in absolute poverty.

Poor urban neighbourhoods lack access to water, sanitation, and adequate health care, and crime is rampant. Environmental degradation is a serious problem.

This situation has particular relevance for the water issue in Mozambique. As indicated by the World Bank: "only 32 % of Mozambicans in a population of 16.9 million inhabitants have access to safe water. Access to water is limited to a few hours per day. In addition, many receive irregular, low-pressure water supply that is of poor microbiological quality"

In addition to this situation "only 13 percent have piped or well water at home".

This situation has justified strong arguments for changing the role of the government in water supply. These arguments are well synthesised by the following "the use of the private sector will be an essential tool in enabling the government to improve and expand urban services in an accelerated and efficient manner".

To understand the above scenario the historical context in which Mozambican development took place needs to be understood.

## Acoustic ecology in Maputo

It's the 3<sup>rd</sup> August 2006, the time is 10h00 a sunny day with a clear sky and slightly windy, it's the end of winter. I am walking barefoot and blindfolded spending a minimum of two hours exploring physical balance, listening and recharging my senses in the beautiful gardens of the CCFM [Centre Culturel Franco Mozambicain de Maputo] the place where I began to conduct my research around the city of Maputo to allow me to contribute a music composition for the choreographic work *Taxidermie* a project conducted by a French company *Projet In Situ -Choreography*: Martin Chaput, Martial Chazallon  
**Assisted by:** Panaibra Gabriel, **Mozambiquean Dancers:** Domingos Bié, Panaibra Gabriel, Janete Mulapha  
**Scenography:** Berry Bickle **Music composition and diffusion:** Dimitri Voudouris **Lighting:** Cyril Givort. The CCFM is in the center of the city surrounded by two busy roads, on the west side is the Roman Catholic Cathedral of Our Lady of Fatimal and the oldest park in Maputo named after Samora Michel is situated behind the CCFM on the northeastern side. This is my second visit to Maputo and I have spent many hours exploring different areas of the city from the market places, museums, shopping centres, schools, the station, the harbour, traffic and many other commercial spaces making observations.

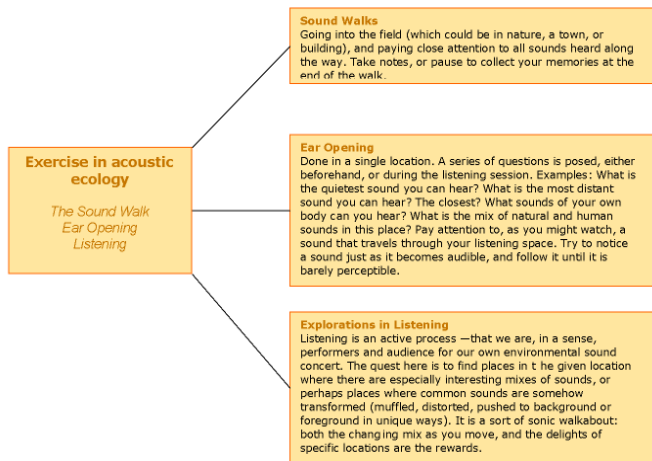


Diagram 1.0: Exercise in acoustic ecology

The environment of a city consists of many components that constantly interact with one another. There is no doubt that man has made large contributions to the environment but it is also important to note that all organic matter has to some degree left its mark in the environment. With the arrival of the industrial revolution cities started to grow rapidly as industry became the focal point of economic growth, as people began to earn more money the lifestyles changed e.g. an average household would own a motor car or two, a washing machine, television, radio, etc. Transport changed from a motor vehicle to an aircraft. To an electric train ride.

Technology is the greatest contributing factor that has changed the sound ecology it has also through pollution had a destructive impact on the environment resulting in health hazards, affecting the fauna and flora eroding the landscape, changing the composition of the atmosphere and manifest in many social injustices such as famine or toxic dumping this pollution manifests clearly in the soundscape.

I was standing in a queue at BIM a bank in Maputo and became aware of the soft mechanical hiss generated by the air conditioners I realized how permanent the sound was and how in a pre-technological world the sound in the environment would be short lived. Lets also look at the invasion of the cell phone in the environment were in Africa especially the majority of people own a cell phone the sound ecology is infiltrated with ringing tones and this is a good indication of how modern technology has removed the sound from its source e.g. a band playing their song can now be realized through the cell phone. The artificially generated noise is on the increase it threatens silence [*the average ambient sound in the city of Maputo is between 50dB – 94dB this came from various recordings conducted at various parts of the city and at different times*]. Maputo is a city undergoing development and as this happens more and more people enter and settle in the city this will change the ambient sound of the environment making it louder. It is said that the ambient noise of a city increases between 0.2dB and 0.6dB annually.

Is Maputo reaching the level of non-culture just like other major cities in the world if not yet it is certainly heading that way.

We are so programmed that we do not care or search for a quiet space the quiet rooms are obsolete.

Silence is a key to our personal and cultural sensitivity both acoustically and socially. If we lack sufficient silence we are likely to lose valuable ecological and communicative skill. When we address noise we need to look further than the volume issue otherwise we lose sight of the complexity of the puzzle we need to examine the acoustic space, as a whole e.g. a road worker using a jack hammer in a street which is surrounded by tall buildings that are composed of wood, concrete, steel, glass the tarred road the vehicles parked on opposite sides of the street organic life [humans, animals] passing by the motion of still and moving objects are all interacting with the sound that is generated by the jack hammer we also need to look to what degree objects absorb and reflect these factors are factors that can change the kinetics and acoustic morphology of the sound making it louder or softer by lengthening the amount of time it takes for a given noise event to decay. Although noise can be classified as having health hazard by causing impaired hearing, depression, anxiety etc.

Noise is part of daily life its on the increase as it invades space due to factors mentioned above but for me it is the challenge of understanding the dimensions of noise and the desensitisation of people to noise, how man conceptualises noise is noise measured only physically or is it determined by the way we perceive it in the form of pre-conceived ideas that determine how we associate and engage with it. To compose *Taxidermie* it was very important for me to be engaged in understanding the sound ecology of the city of Maputo its people, its behaviour and the meanings that generated out of this exercise.

## Models of communication – interdependency between environments

- Molecular environments**

Basics of oxygen and carbon dioxide transport.

Life of humans and other animals is based on aerobic metabolism utilizing the oxygen (O<sub>2</sub>) produced by photosynthesis in plants. On the other hand, the plants use carbon dioxide (CO<sub>2</sub>) as raw material in their process of producing sugars using energy taken from solar visible light. Sugar and carbohydrates in general belong to the key nutrients, which when combining with O<sub>2</sub> in burning process in the cells of human body, generate the energy required for living. The CO<sub>2</sub> generated as waste gases carried by blood to the lungs and eliminated during exhalation to the ambient atmosphere for being available for the plants again. The exchange of gases (O<sub>2</sub> & CO<sub>2</sub>) between the alveoli & the blood occurs by simple diffusion: O<sub>2</sub> diffusing from the alveoli into the blood & CO<sub>2</sub> from the blood into the alveoli. Diffusion requires a concentration gradient. So, the concentration (or pressure) of O<sub>2</sub> in the alveoli must be kept at a higher level than in the blood & the concentration (or pressure) of CO<sub>2</sub> in the alveoli must be kept at a lower level than in the blood. We do this, of course, by breathing continuously bringing fresh air (with lots of O<sub>2</sub> & little CO<sub>2</sub>) into the lungs & the alveoli.

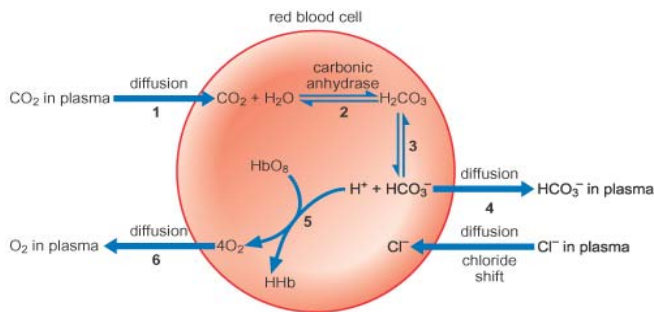


Diagram 1.1: Oxygen and Carbon Dioxide transport mechanism

Oxygen is one of the substances transported with the assistance of red blood cells. The red blood cells contain a pigment called **haemoglobin**, each molecule of which binds four oxygen molecules. Oxyhaemoglobin forms. The oxygen molecules are carried to individual cells in the body tissue where they are released. The binding of oxygen is a **reversible reaction**.

Humans, which are a collection of cells, breathe air (oxygen.) Without air, human cells die quickly.

In other words, this is the only time and place where the body uses the oxygen we breathe. Nowhere else, but in the creation of cellular energy (ATP), does the body use its oxygen. The machine works like this. Within the many mitochondrion power plants there are many engines creating power. Each engine cycles by burning the *shipped-in* fuel & air supplies. The cycle takes in glucose & oxygen, and in the process of generating energy, creates exhaust fumes & waste products. The exhaust fumes are carbon dioxide. The waste product is water from cellular respiration.

In biochemistry, this cycle that prepares the fuel (glucose) to be burned and removes the exhaust is called the *Krebs cycle* or *the citric acid cycle*.

- Dynamic interrelationships between various environments and the impact on ecologies**

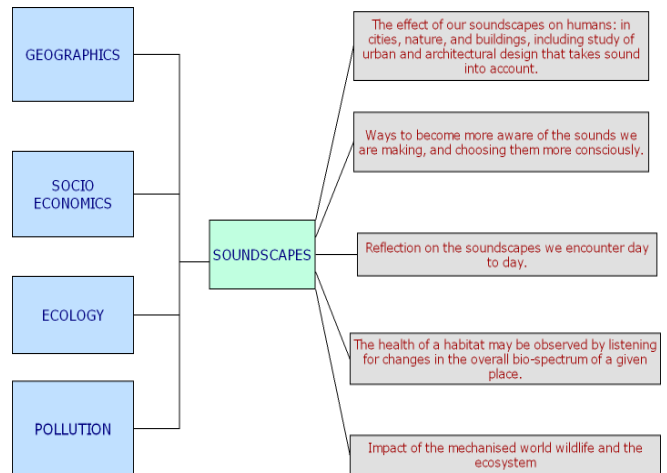


Diagram 1.2: Impact of various environments on sound ecology

Various macroscopic situations will influence the sound ecology see **Diagram 1.2**

**Geographics**- Maputo is a coastal town situated in south eastern part of Africa with a sub-tropical climate that allows for certain vegetation to grow that in turn attract a specific ecosystem that will not be the same for instance in the Cape Town region of South Africa

**Socio Economy** of the region can have an impact on health services, transport, road works, peoples standard of living and the infrastructure of the city, e.g. the poor economic situation in Maputo had a negative impact on the road works section of the economy were roads were neglected and deteriorated with an abundance of potholes, intern this had a negative impact on the vehicles causing such damages that would not make the situation economically viable to repair the damaged suspensions and CV joints that intern have a contributing factor to the soundscape of the city.

**Ecology** is affected by the poor economics that allow people to invade the habitat of the animals destroying vegetation, cutting down of trees in aid of fire wood this has a negative impact on wild life were this is reduced or destroyed completely this in itself has a subtractive quality to the soundscape.

**Pollution** is one of the main contributing factors introduced by man that ranges from physical waste, environmental chemical pollutants air land and water as well as the mechanization of the urban environment that threatens the acoustic environment to appoint of extinction.

A tree in the garden is exposed to seasonal changes it goes through a life cycle that allows it to shed its leaves in autumn and absorb minimal nutrients from the soil in winter however in

spring the elevated temperature allows for flowers and new leaves to blossom and when the first rains arrive the roots will absorb the necessary nutrients from the soil that will allow the tree to grow and to bear fruit etc. However as soon as man interferes with this natural process in some way or another the eco system is affected.

1] The wind blows in autumn the tree sheds its leaves the leaves rot in the soil as micro organisms break them down and allow for compost to be created thus converting the leaves to a natural fertilizer [food source]. Man removes the leaves because they make [from a visual perspective] the landscape dirty thus a process in the cycle is affected and the natural fertilizer is replaced by artificial fertilizer or a natural one that is composed of various other plants again the environment is affected so much so that the natural cycle of things gets so altered that the micro environment dies off and eventually leads to problems.

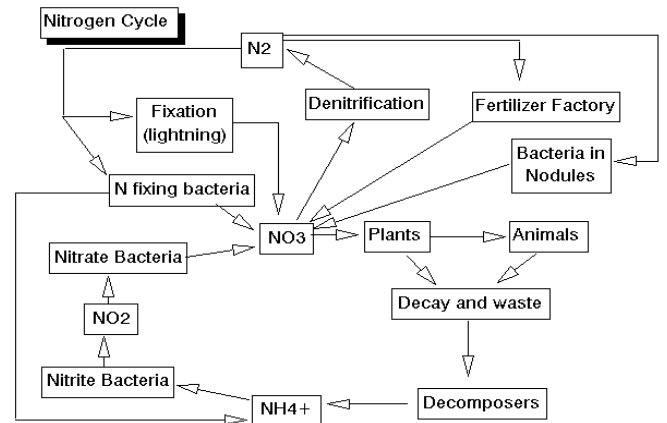


Diagram 1.3: Carbon, Phosphorus and Nitrogen Cycles

The mechanisms and functionality of interdependent environments as per **Diagram 1.3**

- **Physical topographic environment**

Referring to Diagram 1.4

A] It is 10h00 the supermarket at section D of the diagram gets held up in a robbery a man gets shot, the robbers get away with money and attempt to flee in the B direction were they are apprehended by a police road block.

A crowd of people and passers buy are gathering around the scene of the robbery, the traffic also slows down around the area causing traffic congestion.

The ambulance has just left the scene with the wounded man who happens to be a politician; the ambulance is also slowed down by the traffic and pedestrian congestion.

B] At section A of the diagram a police vehicle is attempting to get through the traffic congestion and arrive at the scene of the robbery.

C] In section C the hospital is alerted by the police and they intern are trying to contact the trauma surgeon who happens to be attending another emergency.

If we look at the area were the activity is taken place in that part of the city we can comfortably label this environment a micro environment that is composed of multiple events around the same occurrences e.g. points A, B, C.

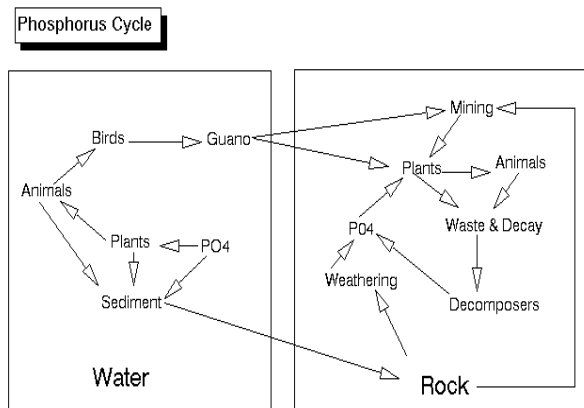
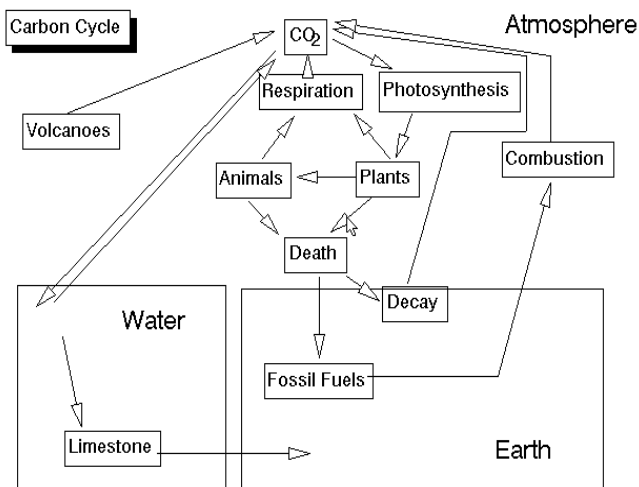
E] A few hours later because of the delay to get the victim to the hospital and to get the surgeon to arrive earlier he dies.

F] The media gets onto the scene of the robbery and in a few hours this is on the local news and newspaper and in the national paper.

The events in the area which were confined in a micro-environment have through the media spread nationally. This is now affecting the mezzo-environment.

G] The politician is a national figure that is known globally and was assassinated by a terrorist group who have just been arrested.

H] The news through Email, TV, Radio, Newspapers has reached the global community in a matter of minutes and has become international news.



Through the power of the media the news has reached the macro-environment.

1] In return the stock markets retaliate and in a few hours the currency of this country is affected which in turn affects economics, politics, and the nation.

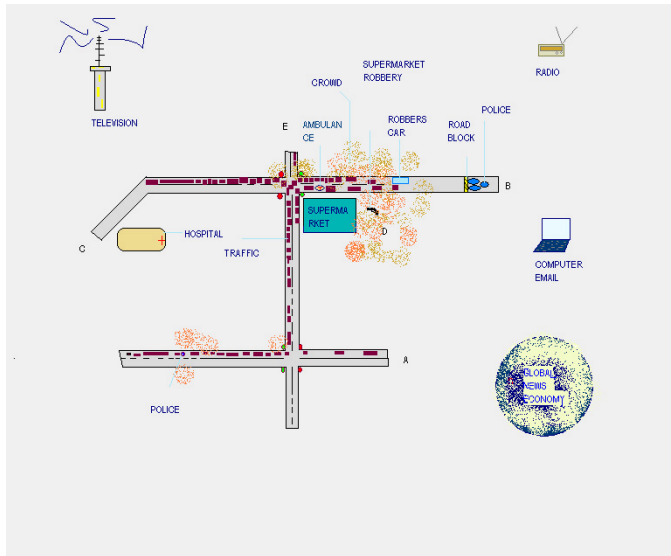


Diagram 1.4: Introducing interdependent environments

Can we thus say that a certain event caused congestion around the scene of the robbery thus a build up of physical and psychological environmental tension at different sections of the micro environment, next the mezzo environment is affected the news causes a different kind of tension which could be described as emotional over a percentage of the local and countries population thus the tension build up around the local

community is more than likely greater than that in the rest of the country due to its concentration and also the psychological connection the local community will have with the victim, the supermarket and the security and safety in their city, as opposed to the towns further away. The impact the news has abroad is different it can be emotional but is definitely economic as currencies and stock markets are affected, tourism and this will have an impact on the country's political arena, economic affecting all 3 environments [Newton's 3rd law of motion].

Research mechanisms that allow natural environments to exist, communicate and interact at various levels has allowed me to formulate three components as a form of strategy that influences my way of composing.

These three components are namely:

- Micro-environments [μ1]
- Mezzo-environments [μ2]
- Macro-environments [μ3]

Each one of these environments is composed of multiple components that vary according to the study that is conducted. In the case of the city of Maputo the environments assisted me in researching elements of memory, rhythm, gesture, movement, expressions, cultures, effects of globalisation, economics, sound ecology and sound perception.



## Understanding Gesture

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What is a gesture? Is it a mere expression of the inner self, is it specific to race and culture does it have history does it have memory, what are its dimensions [individual or unique to one]. Does gesture have language and finally can gesture extend outside the body as part of the surrounding environment?

To understand the way we behave in our own environment we need to understand and through observations to analyse the behaviour of a specific environment in relationship to both organic and inorganic levels. This interaction in communication might seem abstract at first however in this chapter I will attempt to demonstrate the dynamic interrelationships between systems, e.g. a building was constructed by engineers and architects the design becomes an extension of a gestural relationship that the creator has which is governed by his artistic expression which is governed by economics and history, politics, emotion, etc. The building will house X amount of people who will in return have their own personal relationships [their own office, the smoking room, parking in the building, the coffee shop on the ground level, the director's office, etc]. They might or might not decide to rearrange and decorate their own office according to their artistic capabilities.

This gesture is governed by various factors that are governed by

The individual:

- Psychological and emotional state of the individual
- Education
- The individual's commitment to work in the space.
- Working satisfaction and money or the later only.
- The nature of the individual outside the space.

The space:

- Ambience
- Amount of natural light e.g. windows
- Temperature control in the space e.g. air-conditioning
- Noise management from the city outside and the noise inside
- The building
- Areas of rest e.g. coffee shops, rest rooms etc
- Efficiency of the operational systems e.g. telephones

From the outside colour, size, shape and the shadows cast by building on surrounding area can have both a positive or negative impact to the surrounding environment. The passers by are people that do not work in the building and have their own personal relationship to structure that depend entirely on a personal level of interpretation.

The factors governing their interpretation of the outside of the building are:

- Psychological and emotional
- Education
- Self-esteem

The design of a city is governed directly by politics, economics and history.

The main protagonist, who in this case is Man, is the main contributor to the model of the city. Man's input contributions can influence the ecology of the city in the micro, mezzo and macro ecological level and the impact can be defined in two areas.

### Positive Impact:

Short, intermediate and long-term infrastructure improvements should focus on areas of:

- Education
- Operation management control systems allowing for easy accessibility

Local government, role and business role in –electricity and water distribution, sanitation and infection control measures, transport and traffic control, economics, parks, pollution management, ecology management, roads and building management systems, policing and security, job creation, arts and culture, laws, libraries, building of schools, colleges and universities, sports facilities, housing.

- Media

Transparency:

- Economics and politics

Healthy politics can result in economic stability for the country and the city.

### Negative Impact:

This can be described when systems fail and this can be caused by the above were bad politics could have a negative impact on the economy, on media transparency and on operation management systems in general this can lead to the total collapse not only of the city infrastructure but the country and the region as a whole affecting all levels in the ecological structure.

There is no perfect system each system is interdependent on one another however we need to arrive at a calculating point so we can identify and improve on the impact that human gesture has on in the environment keeping in mind that the foundation of such a model is directly proportional to the psychological impact that an individual has on the environment and visa versa. In understanding gesture we need to begin to dissect and study the mechanisms of operations from an atomic level and a cellular level and the roles that each component plays in the shaping the environment. It is the specific physiology of cellular matter that engages in the lifecycle of systems from which history and science, politics, economics and our basic survival evolves from.

In Maputo one is confronted with dilapidated buildings and on the other hand ultra modern buildings next to each other, the roads are wide and spacious but full of potholes as they have not been maintained, bad sanitation [rubbish removal, sewage] system is a health risk factor where disease can start and spread. The poor conditions reflect on the history of the country that from Portuguese colonialism, communism and the long civil war has had a negative impact on the country resulting in economic collapse. However the change to democracy has brought a positive impact to the economic situation in the country and this can be seen by the gradual improvement of operation systems.

In my view culture is the product of the interaction between universal biological needs and functions, universal social problems created to address those needs, and the context in which people live. Culture is created as people adapt to their environments in order to survive, and it results from the process of individuals' attempts to adapt to their contexts in addressing the universal social problems and biological needs. Culture influences both verbal and non verbal methods of communication thus gestural languages arise from a specific cultural context, giving meaning to certain actions that helps in the "grammaticization of space," of which are pertinent to the design of buildings and cities. The interaction between body, space and language in theatrical performance and sign language provides relevant models for exploring the latent potential in post-industrial urban space for the making of architecture. Those who have studied the nature of human gesture have developed classification systems for gestural communication.

Wilhelm Wundt, the pioneering German psychologist, published a work in 1921, subsequently translated as *The Language of Gestures*, in which he ascribes gestures to the following categories:

- Demonstrative

Pointing, towards things in the world, towards ourselves and revert back to prelinguistic conditions and express emotions. Demonstrative gestures "originate in the person's own body as the center of all spatial orientation." Other demonstrative gestural concepts include: dimensional qualities; parts of the body; and "gestures which place the three dimensions of space in the context of past, present, and future," in other words uniting space and time. The notion of pointing contained in these kinds of gestures are essential to all communication and orientation in the world.

- Imitative (descriptive)

Imitative gestures are pictorial or representational by using hands, fingers and facial expression.

- Connotative (descriptive)

Connotative gestures are transitory or held indefinitely and border on symbolic and represent objects by "singling out arbitrarily one of its secondary traits to represent it."

- Symbolic

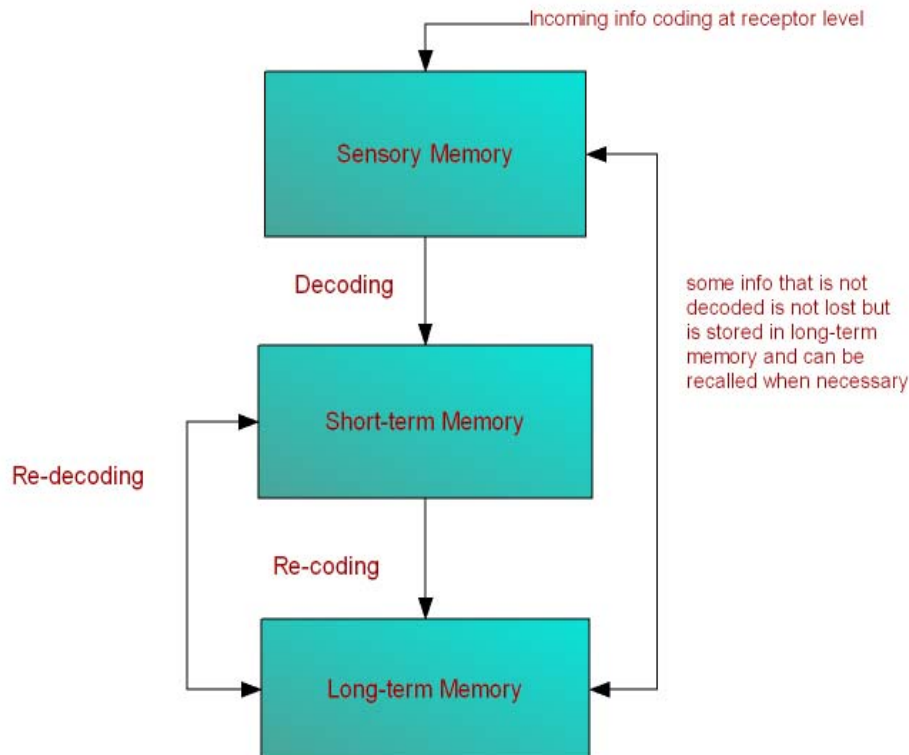
Signs invoke a "mental concept." that operate through association; they must be learned as they belong to a shared understanding.

Human gestures both shape and are shaped by the spaces in which they occur, it is a reciprocal relationship. We can note that public communications between citizens has often been displaced into new spaces, technologies and languages. Cross-cultural communication can be difficult, inaccurate, and highly stressful. When we are immersed in an environment where the language, attitudes, values, and behaviors are alien to our own experience, we may suffer disorientation and frustration--an experience known as "culture shock." This is because culture affects almost all behaviors. Culture governs how close we stand while talking with another person. Culture governs how we use (or avoid) eye contact. Culture governs how we express (or suppress) powerful emotions such as joy, disapproval, and anger. Culture even governs the expression (if not the actual experience) of love, because culture determines whether we feel free to express love in public settings by holding hands, hugging, or kissing the person we love.

Most importantly gestures unite time and space, therefore, contributing to the narrative order of the city. The spaces of the postindustrial city still function in developing narrative from the intersections, or events, that the structure engenders. In the modern era the definition of urban space was increasingly determined by machines that extended the mechanical abilities of the body. This was added to the premodern city which more directly expressed the nature of the human body in space. In the postmodern world we are adding layers of electronic technology that imitate our nervous and neurological systems and extend our intellect and communicative abilities. The decline of bodily gesture, increasingly filtered through technology, as the basic expression of our embodied existence in the city is understandable. For urban designers a new order of heterogeneous and anomalous spaces can be derived from an investigation of the postindustrial city. The vitality of public communication lies in the structure of urban spaces and their potential for public gesticulation. Beyond adding an expressive or figural aspect to the spaces of the city, human gestures are gifts to the city, gifts to the strangers that populate any city.

## About Memory

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- **How does the way that we learn influence our ability to remember?**

Learning involves adaptation to the environment, where new meaning is acquired and major reorganisation of cognitive structure occurs. Memory on the other hand, lays emphasis upon retention of information without radical cognitive reorganisation. It is with such definitions in mind, that the following explanations of how techniques of learning may influence memory should be easier to comprehend.

- **How does human memory compare with computer memory?**

As we are aware the conventional method within computers for data representation is to store a pattern in memory, which is copied when retrieved. The storage medium may be an internal hard disk, a memory chip, floppy disk, magnetic tape, cartridge tape and more recently the CD-ROM. Such mediums store each piece of data in separate locations. The pattern as mentioned will consist of binary values (1 being the on state;0 being the off state) which are used to represent characters. In a nutshell,

memory now of RAM which can be accessed or altered, ROM which cannot be altered by programmed instructions(though there is of course PROM and EPROM) and Cache memory. Having looked at the basic structure and operation of the memory in terms of hardware, we may now look at the software. Unlike the brain computers separate memory functions from computation and use software to glue the two back together. The software performs the processes and activities, one such process being the retrieval of information from memory. This is done by entering a series of statements, made of electronic impulses, which are transmitted to the computer, which in turn reads them and converts them to a usable form. Such an input operation is termed encoding.

Now we shall look at the 'hardware' of human memory. The brain contains roughly 100 billion neurons, each of which has roughly the same processing capability of a modern computer. Neurons are cells which accumulate and transmit electrical activity, a considerable number of these neurons being active at any given time processing information through interaction with one another. However,neurons do not store localised information and that brains have no memory storage space and do not store patterns like the computer. This is considered true as neurons die daily,

and we do not lose important information immediately. Therefore the question is, where are memories stored?

Neurons communicate through synapse points (the near contact between axon and dendrites of individual neurons) and the strength of the communication, i.e. the amount by which one neuron affects another, varies between neurons and with time. Neurons can cause others to be positively or negatively reinforced and that this is the basis of learning. This may be illustrated by word association games. Different people will associate different words with one given word, implying associations exist between neurons. Therefore memory may be considered as a pattern of activity across the neurons. Thinking of something causes a great deal of neural activity, neurons being stimulated and having an excitatory or inhibitory effect on others to which they are connected. This forms a ripple effect which causes other associations to be stimulated.

- **How do we forget?**

There are a number of theories on how we forget. These are listed below with their descriptions:

- **Decay (or atrophy) theory**

Basically this states that if information is not used (or rehearsed), with time forgetting may occur. Behind this lies the theory that in memorising something, a physical change takes place within the neuroanatomy. This trace will eventually dissolve through disuse/neglect. However, the decay theory does not explain the influence of activities between the initial learning and attempted recall. This leads to the following theory, interference.

- **Interference theory**

This theory has been the dominant approach to forgetting for the majority of this century, hence much research has been undertaken on it which has been well documented.

The two types of interference:

Proactive - when previous learning interferes with later learning.

Retroactive - when later learning disrupts earlier learning.

The hypothesis is that associative connections are held in memory so long as other competing information does not interfere with them. After learning, the subsequent daily activities of waking subjects inhibited their ability to recall the nonsense syllables, this being an example of retroactive interference.

- 1] The spontaneous recall of long 'forgotten' facts.
- 2] The invariably greater speed at which material can be relearned than newly learned.
- 3] When hypnotised, the ability to recall long forgotten facts and experiences.
- 4] After hypnosis, the ability to carry out instructions given during hypnosis and now consciously 'forgotten'.

- **Displacement theory**

This is associated with short term memory, where the capacity for information is limited. This theory cannot be associated with long-term memory because of its virtually unlimited capacity.

- **Neural Consolidation theory**

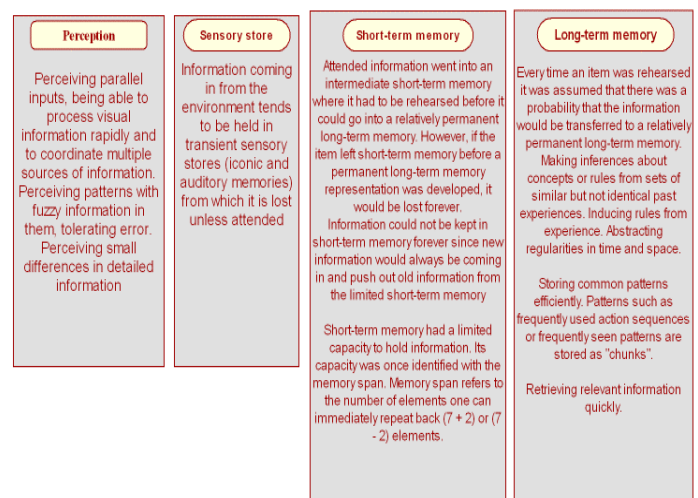
They state that it is a well known fact that brain damaged patients often report memory loss for events that have taken place immediately before their accident. This is known as retrograde amnesia. There may be many other factors going on in such a subject's life which might influence memory. These factors could be viewed as interference.

There is also a theory for infantile amnesia, meaning we are unable to recall events from the first two or three years of life. The reasons for this are still unclear. A number of theories have been put forward for this, the traditional one being the inability to store events in the first place. The attentional and perceptual systems of the infant may not be sufficiently developed to encode the events.

- **Cue dependant theory**

It is generally accepted that learning takes place within a context and that we encode information in relation to its perceptual environment. Forgetting here, is actually failure of retrieval cues to match the encoded nature of items in memory, because the cueing conditions are too remote from the thing we are trying to recall.

However, this final theory is not so much based upon actual forgetting, which implies memory is lost, as it is that memories remain but are perhaps very weak and waiting for the right stimulus to revive them.



## Composing *GESTICULAR*

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The speed of movement, force and weight. With the keyword movement the context to music should be given since all sound is a result of moving objects. And the idea of particle physics tells us those elements like molecules represent a kind of modular system with molecules as smallest elements being able to be attached to each other. Newton's laws describe and it enables us to create a physical model out of modular elements like pearls and connect them to a chain. In the case that at least one part of the chain is fixed movement would lead to periodic vibration and this, applied to a speaker would lead to a sound. The physical model on the macro scale is dependant on the micro, mezzo-elements of each environment, of the modular chain that is interrelated and relies on gesture as a need to shape them.

Gesture relationships extended through the city of Maputo and are an artistic extensions that are by-products of memory governed by economics, history, politics, emotion etc. The sound material which was to my disposal was to create a view of the city as an outsider, although I reside in the Southern African region were South Africa borders Mozambique the city of Maputo is foreign not only to the historical content it posses but also the difference in language. The source for both the material and the title, of *GESTICULAR* clearly shows its current relevance. I should like to emphasize that the composition, in its completed form, is a portrayal of a developing city. The raw material, the original recordings, has not been replaced by conventional orchestral instruments. E.g. a human scream remains a human scream, and is not a coloratura soprano voice. The adaptations of the work do not produce a high-tech electronic adventure, but also, and most importantly, a metaphysical one. They go beyond empiricism, beyond the mundane. Art? The work begins where common sense – fortunately – does not help us anymore. *GESTICULAR* represents a free, an open vision of sound. Not a sequence of destructive sounds, but sounds recording every day life in the city of Maputo. The unevenness of the composition allowed me to portray Maputo as a city leaning forward and backward where such leverage has to do with trying to give a leaning hand helping the state of events to lean forward but economics on the macro level allow for the slipstream backwards, all this is portrayed in the composition were the rhythmical cycle of nature is there but is disjointed bent and tends to psychologically need to be bent backwards to allow for proper steering to evolve.

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