

lines of movement
of flow of processes
in the city and
zones of influence
around these lines



The components we have dealt with so far are:

- Point: it is static and directionless and in order for it to become visually prominent or perceived (and thus add to orientation and movement) it has to be projected linearly and by doing this it becomes a line.
- Line: this is describing the path of a point in motion, the lines we have just analysed that link the points on the line. It is capable of expressing direction, movement and growth.

The first thing to do is to analyse the grid Pretoria has been designed on and how it has changed over time. There are a couple of grids that converge and the topography had the final say in what happened to the grid. The Apies River that flanks the site, could not be moved and thus this is where the orientation of the grids changes and takes on a new appeal and character. The cells each have their own character as part of the score and each cell brings about the character of its surrounding cell by giving birth to the surroundings.

It is against this background that the lines of movement can be added. Again, we start with a point that is distinct on that line. This point is a force that gives rise to movement by either being a landmark that is used for orientation, a point of distribution of commuters, or a goal where someone might be heading. The nature of this driving force is understood and all of these points then give rise to the movement and the resulting line. These lines are represented in the accompanying diagrams. This is illustrated on different scales and starts at a larger scale and then zooms into the finer grain of the movement surrounding the site. The lines are those of movement and the hatched zones around them are those of main influence or the parts that define the character of the system and are to be analysed on a more detailed scale. There is a definite need to distinguish between the roles of all of these systems and the parts they have to play. Yet, one must be able to see where they fit into the greater score and how they can contribute to or how they damage the harmony of the score.

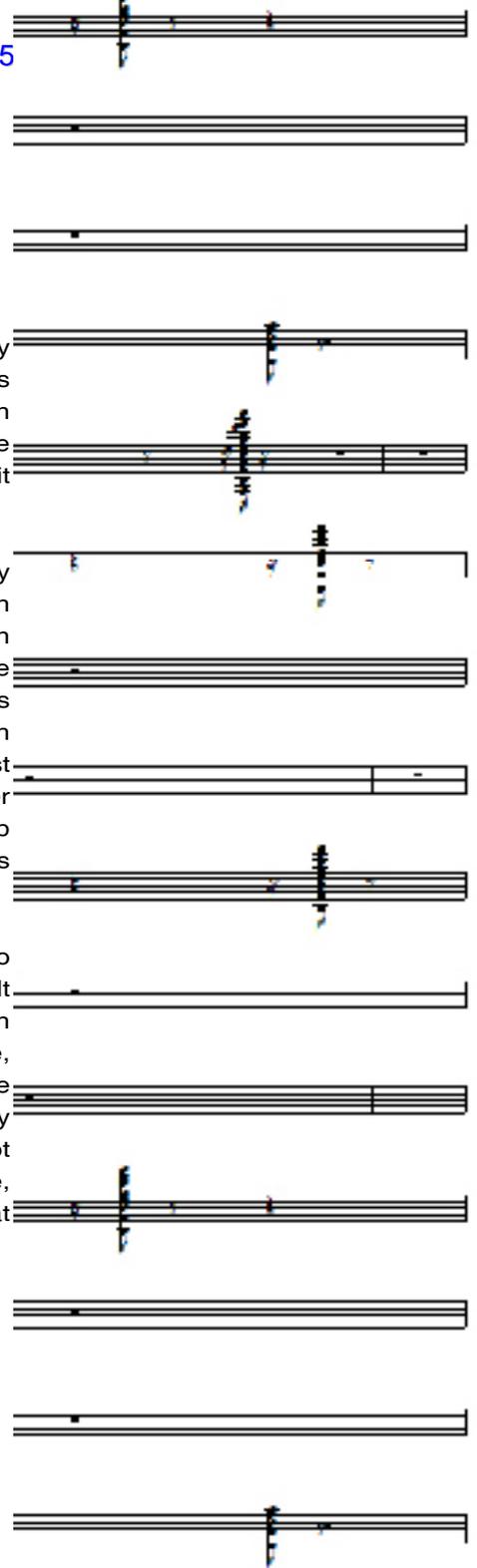
The aim of architecture should be to understand these systems and how they can be changed to make the overall movement and resulting perception more harmonious. All of the points on the line that give birth to other points and thus to the line have also been investigated in detail. Then the scale is reduced to look at the finer movement, the experiential character and the kind of perception. This then leads us to the way in which it will be translated.



grid of streets and
blocks in pretoria

1 2

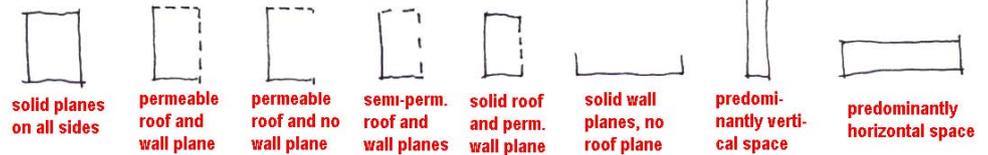
point and
line



My **first attempt** at translation was one of taking the raw information directly from the source without analysing it. I translated the experience that was derived from the movement in emotive terms without being successful in including many measurables. I tried to lay out the rhythm of the city, the pace at which the city moves and breathes, thus the pace and rhythm at which it had developed and the movement which any observer of the city feels.

The problem with this is that the process becomes a bit arbitrary and any decision, that is any note, any rhythm, any pause, should be dwelled upon very long in order for it to be correct and absolutely necessary. This can obviously not be done, because such a process destroys the dynamic nature of the act of translating. The flow of movement is stopped. The end-result thus lets itself, and rightly so, be guided by the movement. The problem is that in this movement there is little space for contemplation and many decisions just flow forth and make the result rather arbitrary. The designer loses control over certain aspects of the process. The only solution was for an intermediate step to be added. Traditional musical notation would not work for these purposes and so a different diagrammatic notation had to be developed.

Another problem was that this was a purely analytical theory that tried to develop non-discursive techniques in order to handle matters that are difficult to understand without a fair degree of abstraction. When this abstraction takes place it is assumed that there are objective regularities in architecture, thus in movement in time through space, to bring about perception. But these non-discursive regularities are difficult to pinpoint and this technique can only be used purely analytically and not generate any new findings. Since I did not quite know where the process was heading and what the regularities were, the technique relied on a lot of intuition and experience – something that contradicts this method in its very nature and is thus destined to fail.

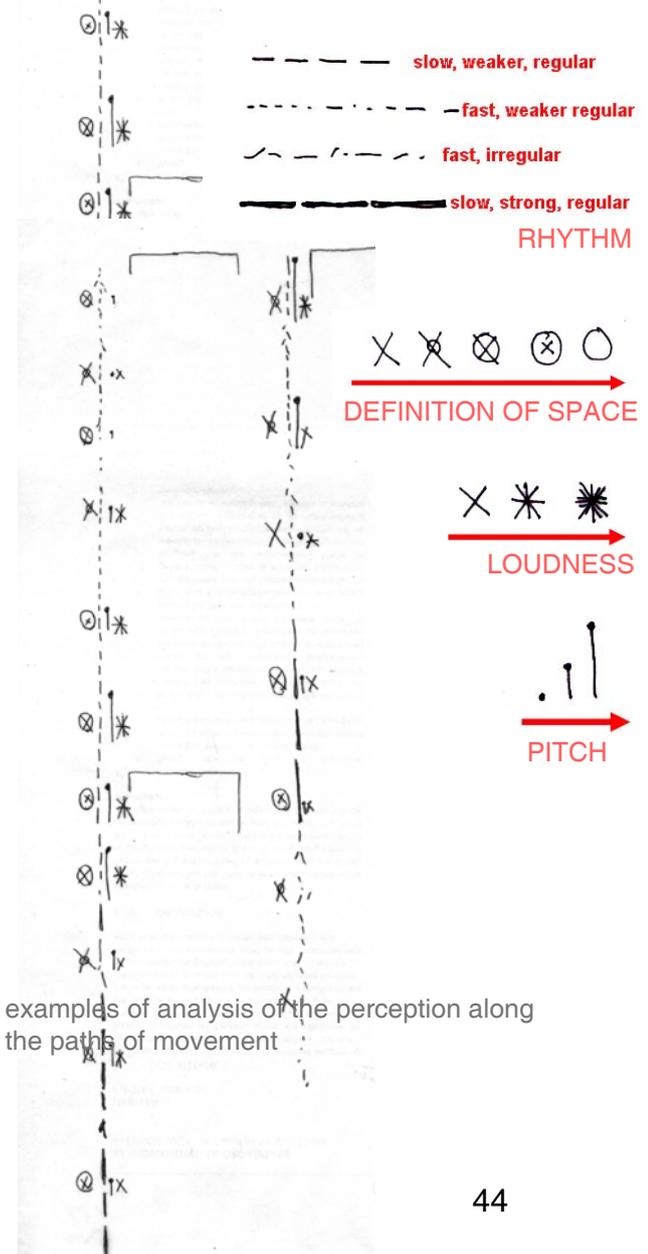


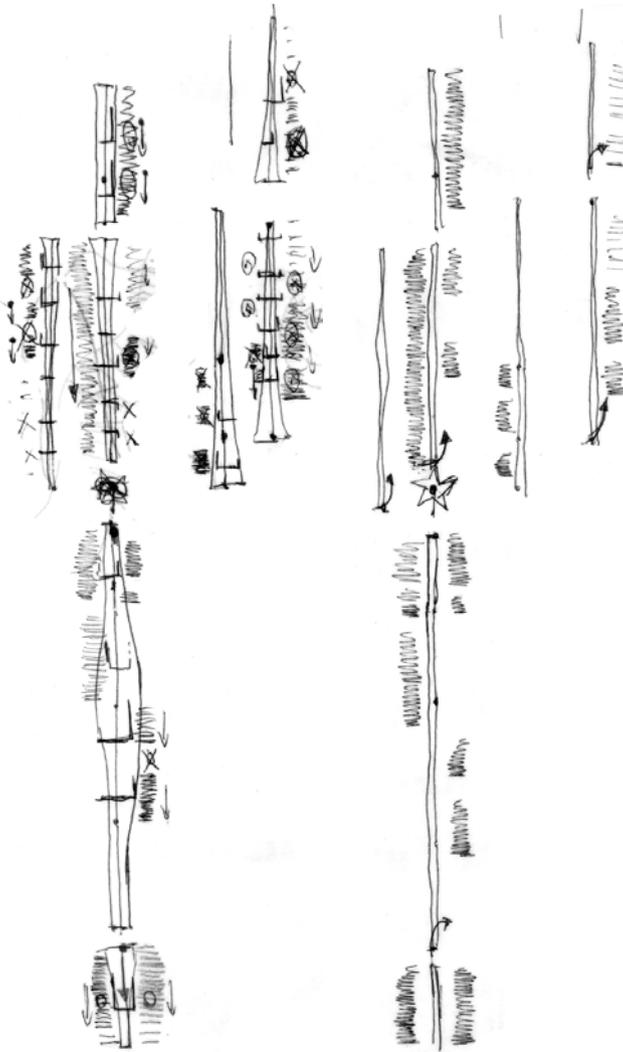
SOLID AND PERMEABLE PLANES AND ORIENTATION OF SPACE

Inspired by some of the work of Donald Appleyard, Kevin Lynch and John Myer, a new notation was developed in the **second attempt**, which took into account the act of moving in time through sequences of space. This ties in well with the statement that has been made of music also occurring sequentially and made up of different points that make up the sequences to compose the line of melody.

The path ahead is interpreted as sequences to follow, anticipation is built up and landmarks are placed along that path. Again, these landmarks are the points that generate movement towards and away from them. The points give birth to other points and thus a line evolves, along which movement is concentrated. The observer moves in time through spaces and his visual field is only observable through this movement and collection of sequences, each building up to the next and being influenced by the one that preceded it.

The only problem with this sequential view is that an observer can enter the line at any point and move in any direction and thus not follow the line prescribed by the analysis. The solution to this would be to follow an approach of magazine-like sequencing, where all the sequences are part of the whole experience along the whole line, but each one of them can also be read and understood in isolation. Should this not work then the striving for the unified whole should be dropped in favour of the articulated or endless composition, where any point on the line can be taken out and changed without having an influence on the whole, but only on its immediate surroundings. The balances and connections of these sequences are not static, but balance over time, where a dissonance or distortion in the harmony will need compensation in later intervals. Two or three progressions are played simultaneously and meet, diverge and react against each other.



space-motion
diagramorientation-legibility
diagram

Two types of diagrams were drawn up, one representing the motion-space relationship and the other dealing with the orientation along the path. The first one looks at the **self-movement** of the subject, how fast he is moving, ascending, descending or turning. Then there is the perceived **movement of the visual field**. Anything that is passed moves past at a certain speed and gets recognised differently. Physically moving objects or very prominent points are of special interest, as they receive more and orientation-bound prominence. **Spatial characteristics** are very important in determining how perception takes place. Whether the space is enclosed or open, well-defined or ill-defined, all has an influence. Together with this, the **proportions** of this space are very important and the quantifiable factor for letting the Harmonic Proportions enter and influence perception. **Light** is also an important factor, although that was one where I could only perform localised investigations, as this is so dependant on time and weather that it is very difficult to do a proper study of it.

The orientation-legibility diagram is one that analyses the points that are used along the **path** to orientate with. These points determine the character of movement and how fast it will be, which in the case of a very prominent **landmark**, that will attract a lot of attention, will make the movement towards it fast and straight-lined. It was investigated for various stages on the line of movement how much of the landmark can be seen and at what rhythm glances are made. **Nodes** were also analysed, as these are the points at which a decision takes place on where to go next. This decision is supported by all of the components that are mentioned here and, dependent on how harmoniously or aggressively they have been employed, they will either pull the person in their direction or push him away from them. **Edges** are another factor that guides movement and orientation along them. The stronger they are, the more focused orientation becomes and harmonious movement is enforced. Again, the rhythm that appears at the edges is also of significance. This rhythm could be one of open and closed, one of accentuation of specific components along the façade of buildings or of elements along the path, like trees, lights or street furniture.

The objectives of this kind of analysis and the subsequent planning of movement to conform to this are the following:

- to present the user of the city with rich and continuous form, a form that has continuity and rhythm, development, provides contrasts, a balance of movement. The tools to be employed include things such as space, proportion, motion, colour, light, texture and detailing. It is the harmonious employment of all of these that is striven for.
- to strengthen the image of the environment, make the user locate himself in the environment and orientate himself according to features within it
- to deepen the grasp of the meaning of the environment, the history, the nature and the symbolism
- to know where one is heading and to understand where one is coming from and gain the identity of the ego as part of the city

This attempt proved to be nearly successful and all the motivation seemed right and justifiable, but intuitively I felt that it still lacked something. I wanted to have something that I can connect with, something with a soul, a plastic representation of all the research of movement in time through space. I almost wanted an answer to a mathematical calculation that added all these components of space into a single and definite answer. I wanted something I can relate to, I can grasp immediately and work with to influence my design and move decisions along.

It finally dawned on me that all of my analysis could be summarised in the visual representation of a line, a melody, passing through these spaces. Just as people move through the sequences, all of them responding to the space and its musical character (with its architectural correlates), so the melody, which is the line of people moving, does the same. This melody has the shape, and character of all the spaces it moves through and is influenced by the character of the spaces. A line is generated, the melody, the plastic representation of movement.

This method is universally applicable. Anywhere, where a human is involved is anywhere where perception is involved, or rather should be involved. Perception, as has been established, is only possible under conditions of movement and quality perception is possible under conditions of harmonious movement. Harmonious movement is only possible under conditions of movement through spaces that have been designed harmoniously.

Perception can occur either by moving through a city and perceiving the city and its context, or it can be by moving through a building, moving between inside and outside, being drawn along by the arrangement of spaces, their material choice and detailing inside the building. Movement can even mean sitting inside a building, working inside a building, but still moving about, either by looking at the arrangements of spaces inside that just call to be moved through, or recalling the harmonious movement that has brought one to this place one is sitting at now. In all of these, the human is a point on the line, a point of the melody. The sole goal of harmonious movement is perception - perception of the context one is in and thus the perception of one-self within that context.

The components that make up the space that aids harmonious movement have been described. These components are the basic building blocks of architecture. Significantly, they all have correlates in music. Whereby movement is seen linearly, being a line, a line that consists of a point that gives birth to other points, a melody is also nothing else than a line. This line consists of points that give birth to other points. What these points are has been discussed elsewhere and will here be used for comparison:

	MUSIC	ARCHITECTURE
PITCH	highness or loudness of sound; vibrations in sound	level of noise of a space, influenced by colour, light; vibrations in light
DURATION	temporal length	spatial length
LOUDNESS	intensity of sound, changes over time	intensity of space in terms of textures, transition of volumes, forms; must also change over time, have a good mixture
TIMBRE	same note played by different instruments has a different effect depending on the palate of instruments	colour, texture and finishing are all instruments in their own right and choice of palate of materials is important
RHYTHM	can build up to a climax, be the stabilising factor behind a composition and create or release tension	has the same effect of stabilising movement, building up or releasing tension along the way; creates balance through rhythmic aligning of columns, varied articulation of forms and hierarchies of elements
HARMONY	needed to blend tones, create musical space, depth of experience and a certain mood	harmonious movement needed for quality perception
PHRASING	certain parts treated in unison to keep order and logic	grouping of materials and openings in a wall or plane into motifs that repeat over time
ORCHESTRATION	each instrument has its own character and can only perform a certain role in the piece that it has been designed to do	use of the material in the way it is intended to be used; understand which materials can be combined with which to give a desired effect
PROPORTION	inherent in any composition and mainly dealing with ratios and intervals	humanization of space and proper perception only possible with the employment of human-friendly proportions

This brings us to the melody. A melody is a line consisting of sequences of pitches of distinguishable height and rhythm. The shape this melody, this line, takes on is determined by the points it consists of. Each point, in turn, is created by the combined use of pitch, duration, loudness, timbre, rhythm, harmony, phrasing, orchestration and proportion. Each person (the point on that line) is influenced by the character of the space he passes through.

Likewise, movement, the line of movement, consists of sequences of spaces that are being moved through. Each sequence of space, or point, is in turn created by the combined use of pitch, duration, loudness, timbre, rhythm, harmony, phrasing, orchestration and proportion. A person is thus a point on this line and the movement he undertakes is as a result of the character of the spaces he moved through.

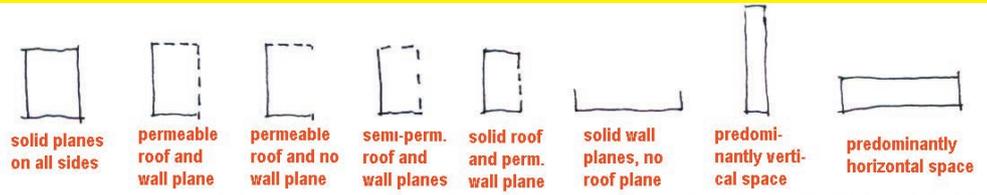
The line of the melody is a result of the sequences of points, but its shape is not important in terms of its literal graphical representation (i.e. drawing it out on paper, where it would maybe be interesting to look at, but arbitrary due to the many shapes it could take on, depending on the drawer's interpretation). The shape of the melody is much more powerful as an imagined line, not translated as something literal, but something plastic that has taken on the character of the sequences of points that constitute it. It can be felt, its character can be analysed, it can aid perception of the experiences of space.

It is here that it can become powerful as a tool for understanding movement. The line of the melody is equated to the line of movement. Just like the melody has the character of the sequences of points that define it, so the line of movement has the character of the sequences of space it passes through. For me, a melody is a powerful tool to aid design, because it is much easier to deduce a melody from all these musical characteristics,

i.e. synthesise the findings into a workable product - the line - than to try and combine all the architectural analysis (texture, materials, volumes, detailing, different planes) directly into a single and universal product that can be used to guide and test design decisions to aid harmonious movement and perception. The architectural language does not possess a word or a symbol that can be seen as this product, the result of an addition of all the factors that constitute architecture – music does, namely the melody.

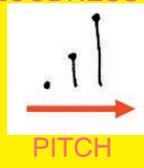
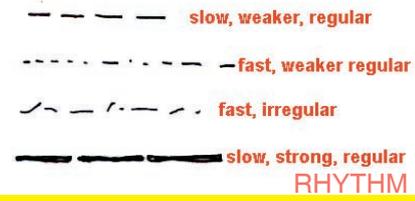
No matter how much time I have spent on evolving this tool, how many times I felt that I wanted to give up in favour of a more conventional approach, how many times I felt that the process was heading to something arbitrary – all of this seems forgotten, when I think of the gains this final solution has brought me. If that is the only thing that I take with me after five years of architectural study, then that is enough.

The implications of this are vast: this melody can be seen in any space, is relevant at any scale. It can be used to understand and design large-scale and function-appropriate movement in a city; it can guide movement on the site to determine where people walk and how you make the walking most meaningful by designing the correct spaces that create this movement; it can be used to design harmonious movement inside a building; it can even be used to design a structure and go into detailing, finishes, arrangement of volumes, light quality and any more of the parameters that go into the equation. The only prerequisite is that a human, his proportions and his perception, are the object. The melody only reacts to the movement of human perception, the movement of a human being in time and through space.

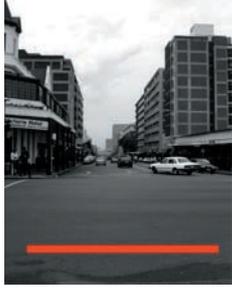


SOLID AND PERMEABLE PLANES AND ORIENTATION OF SPACE

This method can now be applied to an analysis of the route that people take getting to the site. All the spaces are analysed according to those parameters in the table and the resulting melody is formed (in the mind). Areas of problems can quickly be analysed and solutions can be generated to make the melody/line of movement flow harmoniously again. It is also necessary to understand what kind of movement brings people to the site to know what kind of movement must be generated on site to tap into this. The diagrams represent graphically what kind of space exists – where it is enclosed, where the wall or roof planes are permeable, what the main proportions are. Then there is text that describes what further parameters there are and these constitute the character of the melody. Together the text and melody give the vision of what kind of melody flows through what kind of space, how the movement and the space work together.



route analysed from the Pretoria train station, up in Paul Kruger right into Jacob Mare, over Nelson Mandela into Rissik and then around the site



line of **melody** pitches off; no general **rhythm**, can flow in any direction (no metric accentuation of columns or trees, no definite hierarchies, volumes, no edges to channel movement); low **pitched** space (little light intensity, little colour); smooth **shape** of line; **duration** in terms of spatial length does not seem too far (the goals of where to go are near); not very **loud** space (no contrasting volumes or forms, textures); no real sense of **harmony** or disharmony (spatially still undecided); can see goal in distance (firstly Pretorius Square and then Church Square - good magnets for attracting and tunneling movement)

well protected line of **melody** due to roof plane; semi-**loud** space because of colour and complexity of content; faster speed of melody due to channeling of movement; **rhythm** starts off to be established due to increase of space definition and metric accentuation; semi-short **duration**; medium **pitch**

harmoniously proportioned space; **speed** increases due to more space definition and channeling of movement; **loudness** increases (different colour, varied forms and volumes); **pitch** increases (colour intensifies); **rhythm** stabilises (more space definition and metric accentuation)

strong edge on right; line of **melody** compressed in bottom storey and moves along harmoniously and protected; **same parameters** as before

no softening of edges of line of **melody** due to hard edges (hard materials on wall and roof plane); **same parameters** as before

line of **melody** softened (soft roof plane-tree canopy); lower **pitch** (cooler light due to shade and less colour); **speed** decreases (less channelling of movement and wider

taking **pitch**, **speed** and **loudness** with over the road from previous space (due to viewing of goal and seeing the potential thereof or continuing of similar kind of movement); **rhythm** less defined, due to no proper edges and metric accentuation, but not totally destroyed

line of **melody** softened (soft and penetrable roof plane-tree canopy); **harmoniously** proportioned space due to trees; lower **pitch** (softer light, shade); not many jumps in line of **melody**, wider shape and slower; not very **loud** (less harsh textures, good transition of volumes), regular **rhythm** (trees add metric accentuation)

loudness increases a bit (rubbish and ad-hoc building and paving); line of **melody** gets lost a bit due to lack of proper wall plane and permeable fence with bad definition of space behind it

badly **proportioned** and detailed fence (**melody** gets squashed and cut up, only parts of it arrive back on the pavement); **harmonious** flow broken

rhythm gets smoother (better space definition and wall plane); **harmony** increases (drop in scale and the building and the fence work as a unit); low **pitch** (smooth light and shade); not **loud** (less differing texture, smoother transition of volumes and forms)

very well protected **melody** (trees grow over the path); softening and widening of line of **melody** due to increased penetrable roof plane definition; **harmonious** and protected melody; **pitch** and **loudness** get reduced (even softer light, smoother transitions and volumes)

line of **melody** is drawn over road by a strong magnet that offers harmonious movement in all its components

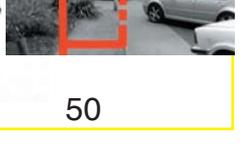
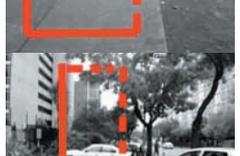
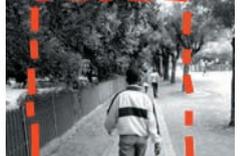
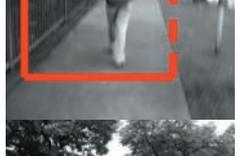
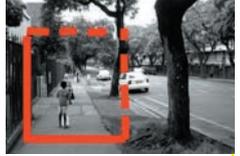
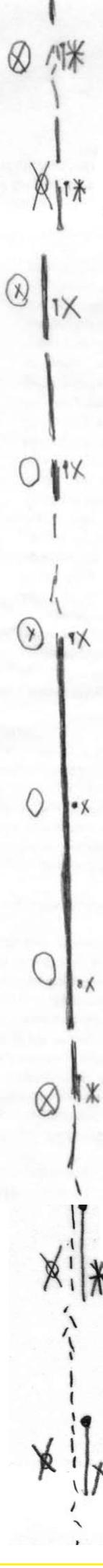
harmonious proportioning of space (tree roof plane); very harmonious **rhythm** (defined volumes, good transition, pavement detailing, open yet defined edge, play of light and dark); soft shape and edge of **melody** line (soft roof and wall plane); low **pitch** and **loudness** (soft light, smooth transitions); low fence makes melody wander off, but still be able to return to main track

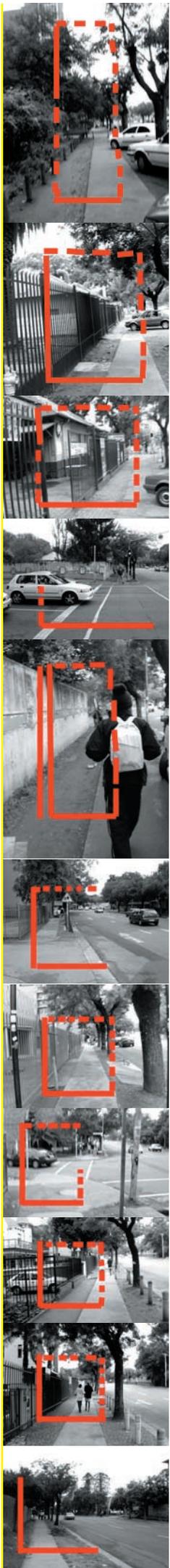
same parameters as before, but **pitch** a bit higher due to trees being pruned and more light passing through

edge of line of **melody** becomes more solid (less permeable roof plane); well **proportioned** space

loudness increases dramatically (movement becomes vertical, hard texture); higher **pitch** (natural light and shade become mechanical); less **harmonious** flow (less defined roof plane, line of **melody** bounces off hard wall plane); less defined **rhythm** (less accentuation on all sides)

loudness increases (verticality and jump in scale); **speed** increases and line of **melody** is harder (hardness of edges and less permeable roof plane); bad **timbre** (materials clash); high **pitch** (hard light and shade)





lack of **rhythm** (no defining edge articulation of forms or volumes); line of **melody** can dwindle off and get lost (permeable wall plane with no definition of space behind it); lack of **pitch** and **loudness** (bad light quality, lack of proper textures, forms and volumes)

Belvoir Flats and shebeen catch the **rhythm** again (good definition of space, employment of varied and harmonious forms); increase of **loudness** (more texture and colour and differing forms); bit higher **pitch** (better quality light and colour)

higher, but soft **pitch** (soft and natural light and shade); harmonious line of **melody** (harmonious proportioning); soft shape and undulating form of **melody** (soft permeable roof plane-trees), good **loudness** (good texture, volmes)

line of **melody** drawn over road (see target in distance-Rissik Street); no **rhythm**, **pitch** or **loudness** created, just retained

rhythm, **pitch** and **loudness** destroyed (wideness of Nelson Mandela Road, lack of magnet on other side, lack of space definition, bad light quality, no metric accentuation or logical and harmonious flow of forms or volumes over the road); line of **melody** becomes weak, fragmented and lost

attempt to start line of **melody** again, but little **rhythm** (hard, solid wall plane without any accentuation - line of **melody** disappears to the right, where better parameters are set); bad quality **pitch** and **loudness** (extreme verticality coming from Theatre Gardens on left, bad **proportioning**, detailing, material choice and definition of volumes and spaces); bad **timbre** (surroundings and materials do not complement each other)

line of **melody** comes back from right (better space definition and proportioning, smooth and permeable roof plane-trees, function that attracts movement-school)

confused shape of line of **melody** (no proper wall plane-permeable fence with no solid edge behind it), broken **rhythm** (little accentuation); low **loudness** (little contrast)

line of **melody** is weak and confused (fence on wall plane and bad space definition behind it make it diffuse and not concentrated any more); little **rhythm** (no accentuation, aligning of trees or columns, transition of spaces and volumes at certain intervals); no defined **pitch** or **loudness** (bad light quality, lack of porper colour intensity or textures); no protection of **melody** (no roof plane)



line of **melody** starts off immediately, due to protecting roof plane (trees-now not only over pavement, but whole street) and **harmonious** proportioning and definition of space; strong **rhythm** (metric aligning of trees, good articulation of forms and volumes; medium **pitch** (good quality natural light and shade); medium **loudness** (good use of textures and transition of volumes); good **timbre** (surroundings and materials complement each other); smooth and wide line of **melody**

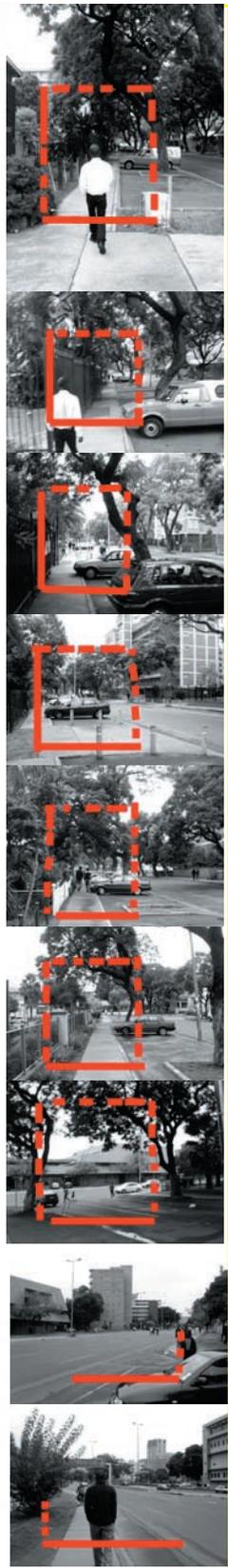
a bit more **pitch** (more light intensity, yet still good quality and well filtered by roof plane); **same parameters** as previously

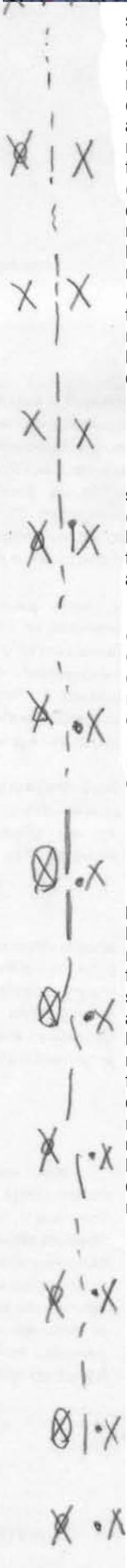
even softer line of **melody** (planting between pavement and building gives a soft wall plane, together with the soft roof plane); **same parameters** as previously

soft and **harmoniously** moving line of **melody**; a bit less pitch (more shading); **same parameters** as previously

harmonious movement stops abruptly and **melody** moves about confusedly (nothing pulling the movement over the road, no distinct landmarks); little **pitch** or **loudness**; line of **melody** becomes broken and weak

line of **melody** open (no roof plane, no proper wall plane or edge definition); no space definition; line of **melody** dwindles and is weak, thin





small **rhythm** (only defined by few small trees); tired **duration** (no goal in sight, nothing pulling movement along); focus of movement only in one direction (paving detail and balustrading all in same linear motion); line of **melody** not protected, no harmonious movement (no roof plane, no wall plane-melody can dwindle off in any direction, nothing to protect it, channel it); harsh **pitch** (single quality light and no shade); almost no **loudness** (no intensity of space in terms of textures, volumes, forms); line of melody becomes very boring, lifeless, without orientation, thin and confused

some protection of line of **melody** (roof plane), but no melody has been created or sustained before to be protected; same parameters as before

opening up of right wall plane (line of **melody** can dwindle out into well defined space); bit of **rhythm** (definition of space); **loudness** increases (good texture and detailing along river); line of **melody** becomes more alive, wider shape, smoother edges, controlled movement)

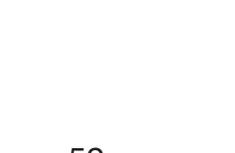
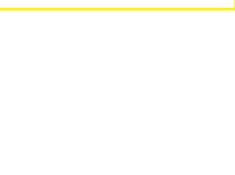
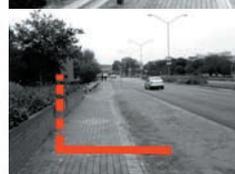
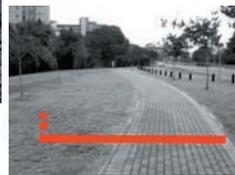
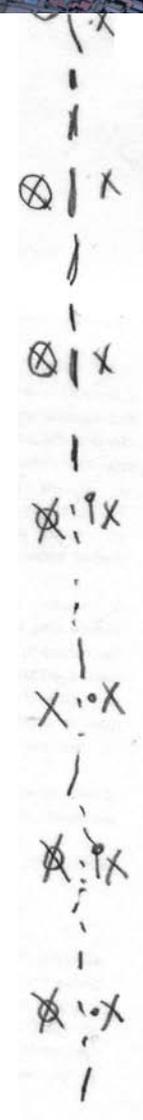
line of **melody** is broken again, becomes confused (no landmark or magnet that pulls it into one direction; no continuity of **rhythm** (no space definition, roof or wall planes, articulation of forms or volumes); low **pitch** (no quality play of light); no **loudness** (too many opposing forces); bad **timbre** (many different components that do not complement each other), weak, thin line of **melody** with rough edges, many broken parts moving in different directions, bit of hectic and goalless movement

good *potential* (when the trees have matured) to catch and protect **melody** and add **rhythm** (trees between pavement and road and not pavement directly next to road); as yet, no proper roof or wall plane to guide line of **melody**; **harmonious** proportion of space (due to trees and future permeable roof plane); little **pitch** (just single quality light and little); some **loudness** (bit of texture and complexity of environment); established, yet weak line of **melody**, dwindling along with a bit of direction

some protection of line of **melody** (bit of roof plane); some parts get lost (drop of scale, left wall plane disintegrates and melody can wander off into mysterious and interesting roads; **same parameters** as previously

increase of **speed** of line of melody (opening of left wall plane and no edge behind that); line of **melody** splits up, dwindles along, still very weak and thin, no real **rhythm**

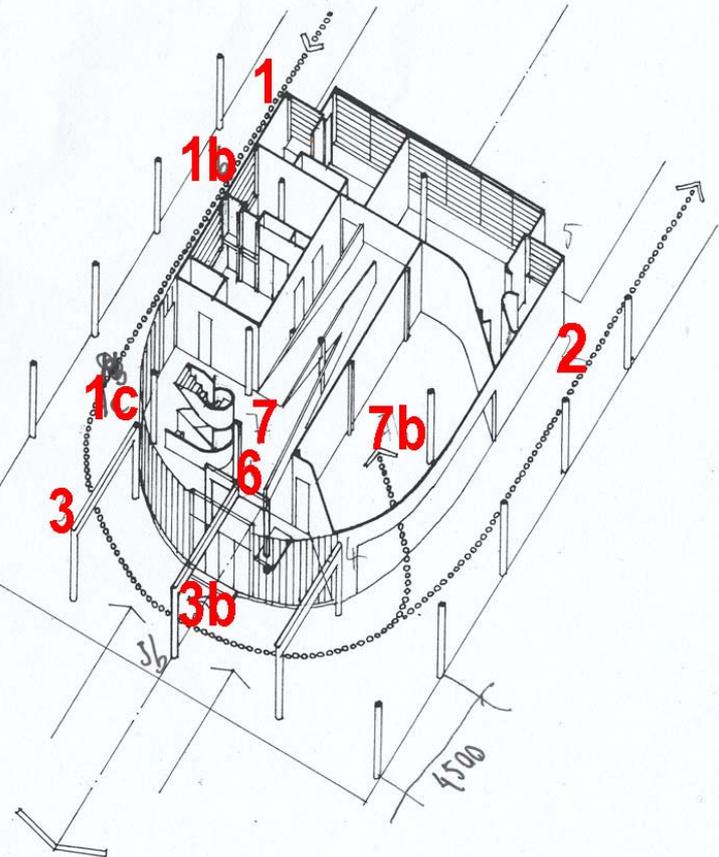
no **loudness** (too many competing volumes too far away), no **pitch** (no life-giving light); no **rhythm** (nothing close to give any definition); no space definition; line of **melody** barely exists, no heartbeat, many different lines going in many different directions without a common goal, thin line with no real edges



This method is applied to analyse one of the corner stations of Modern Architecture le Corbusier's Villa Savoye in Poissy, built in 1929. This example is also easy to analyse, because of the "promenade architecturale", a main line of movement that le Corbusier included in many of his buildings. This line can be followed and the spaces along it analysed. The more harmonious the spaces are the more harmonious the movement through them is.

Note that the graphical analysis is only used outside on the path that people walk. Because of the principle of intersecting volumes and transparency it is sometimes difficult to define distinct borders between spaces.

- 1 strong magnet is needed to draw **melody** from gate over to villa (little support given to melody along the way, little interplay of landscape and building); entrance of villa acts as good magnet and channels melody efficiently (wedged in-between ground and floating roof plate); lower **pitch** (roof casts shadow and little light from the inside – increases as the melody moves around the house); **loudness** increases immediately, but remains gentle (due to different volumes outside and wonderful play of transparency, exposing volumes inside); volumes open up more and more along the way (as transparency increases and the wall curves to free up volume at the bottom; good **timbre** (all the materials have similar machine aesthetic and work well together); **rhythm** established (through columns and window frames); good **harmony** through proper proportioning
- 1b **same parameters** as previously, but **pitch** and **loudness** increase (as transparency increases to reveal more light and volumes – not open fully though, still wall at bottom)
- 1c **melody** opens up and moves horizontally (curve frees up volume and full glazing from bottom to top); melody is inquisitive, wants to move around the corner (movement drawn around by curving wall); **speed** increases (denser spacing of window mullions around the corner); **pitch** increases (more light and transparency and landscape is pulled into bigger volume); **loudness** increases (extra overhead plane and increased transparency of volumes behind the glazing)
- 2 private – no **pitch** or **loudness** (blank wall, no transparency – no melody is drawn there naturally, only locals will go there); from far it might look like 1, but closer no melody is drawn there naturally
- 3/3b melody very **harmonious** (melody is protected more through an additional overhead plane created by the



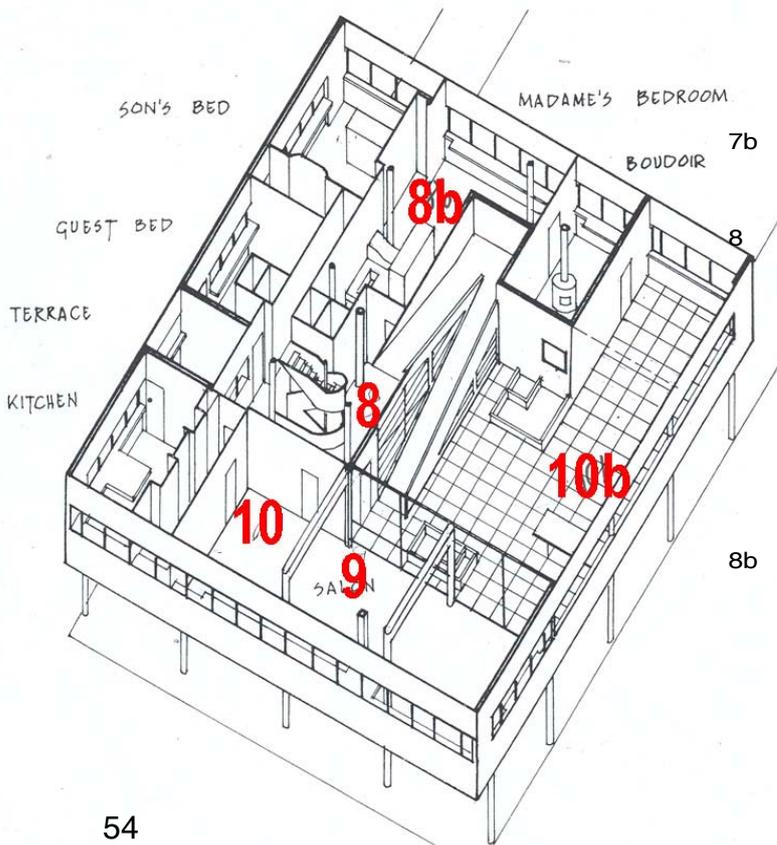
University of Victoria Meyer, M.C. (2005)

beams – protects and catches incursive melody so that it can move inside); **rhythm** very strong (columns, window mullions and overhead beams); **loudness** strong, but gentle (interplay of volumes inside and outside, beam cutting through glass increases space/volume definition and pulls the melody inside); higher **pitch** (strong light/transparency from inside and outside); for the first time the melody sees the inside and the punctured overhead plane and wants to move inside

--- all of this is created **BEFORE** the house is entered – a strong, **loud**, high-**pitched** (but soft), **harmonious** melody with a strong rhythm.

6 melody reaches the inside, but remains partially outside (second overhead plane is part of in and out, transparency shows outside); **pitch** still high and soft, but less contrasting and complex (more interior light, focus on interior transparency); **loudness** similar (many intersecting volumes, interior texture increases); **rhythm** suddenly different (very prominent column that suddenly does not lie on grid – columns not rhythmic element anymore, but the ramp and the surrounding details – smaller scale and closer); **harmonious** proportioning of space

7 public (in the public part) **melody** decides to move up the ramp (that is where it was drawn from outside, where the interest lies and the natural public movement would be. Private and service melodies would move up the staircase); **rhythm** changed to that of the ramp; strong **pitch** (vertical focus of melody and drawn to channel of light); gentle **loudness** (different kind of transparency, lots of intersecting volumes (private and public, where public is the more obvious and enticing))



strongly private – little melody in terms of **loudness** and **pitch** (no transparency, cutting volumes or glass façade)

soft and medium high **pitch** (light from window and top); good **loudness** (doors hint to more volumes behind, see salon through two windows and over verandah); **rhythm** still good (columns, window mullions); **harmonious** proportions; healthy volume (ramp is volume on its own with more light and own roof plane, transition zone is second volume with less **pitch** (less light) and higher roof plane); **melody** is strong and alive and can flow naturally into public zone or upon decision into private

upon entering bedroom, the melody has a different kind of **loudness** (many volumes and more textures and colours on a smaller scale); **pitch** high and soft (different quality light, more intimate, due to general light of strip windows and more focused and higher pitch light of roof lights); **loudness** very high, but **harmonious** (much colour, texture, volumes, forms) - almost too loud for genotype "bathroom", but it is harmonious and thus loudness can be tolerated; bit of disharmonious **loudness** (cold and

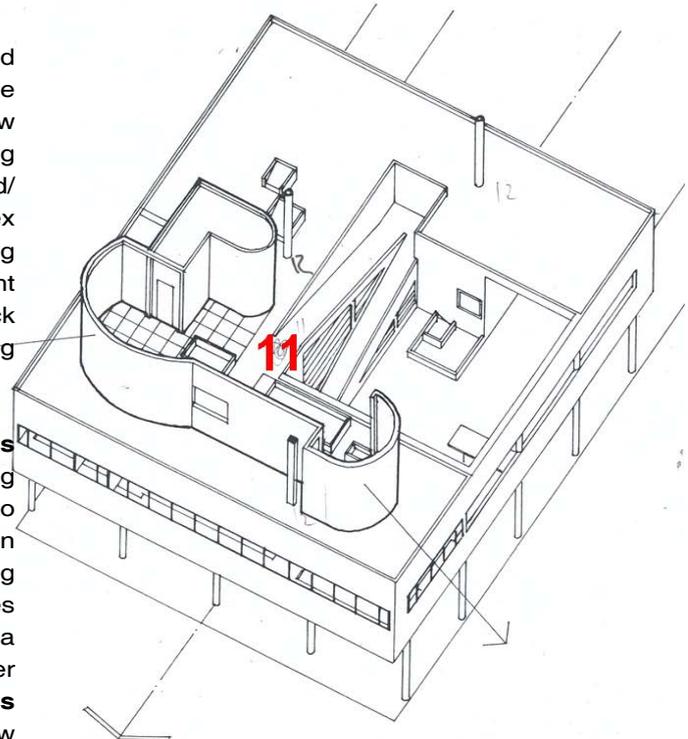
inappropriate toilets and basins for contemporary melody; space between beam and wall plane somewhat disharmonious); high vertical proportions (narrow and high space with secondary roof plane (roof light) and tertiary roof plane (top of cupboard); two zones in bedroom – one of high **pitch**, **loudness** and **velocity** (bathroom) and one quiet (bedroom)

- 10 This room becomes important as the link between public and private. The private does not lie on the natural line of the melody and little transparency exists to suggest the way to the private area and the melody must decide to either flow naturally into the public salon or, by decision of opening a door, into the private. Once the door has been opened, though, the melody flows naturally into the space.
- 9 ramp moves into salon (public) and melody follows naturally (good play of transparency – see salon through two windows - then lose view of salon and see it again upon opening the door or entering the room; also adds to **rhythm**); good protection of melody (room within room – second roof plane through beams as on ground floor and 10 separated from 9 creating two rooms); good **phrasing** (horizontal plane of window ledge/window opening mechanism, chimney cutting through slab (non-literal transparency theme), strip window theme); healthy **loudness** (different colour on one wall, unique form of fireplace, 3 different volumes in the room, glass wall for melody to flow out); healthy **pitch** (different qualities of light – artificial light also becomes feature of space); **harmonious** proportioning; **rhythm** continues (columns, beams, window frames)

ROOF SCREEN

- 10b different forms of transparency (views inside and outside with no glazing in opening); **phrasing** (theme of horizontal planes and emphasis on strip window theme by leaving out glazing, theme of planting - this time in containers); **melody** protected by solid/permeable wall plane, but not roof plane; less complex **pitch** with just one light source, a bit of shade coming in from the roof at Madame's bedroom; different **loudness** (new texture through tiles and plants, lack of glazing, little direct volumes, but a lot of surrounding volumes)

- 11 the end of the melody with good **rhythm** and **loudness** (organic forms at the top echoing flow of movement and holding the melody in the thin wall plane and giving it the opportunity to move about or escape through the openings); **phrasing** (open and closed theme, non-literal transparency (chimney coming through slab), open and closed, solid and open); both melodies meet at the top (private through the decision of opening of a door and the public by natural flow); **rhythm** gets weaker (just ramp, no more columns, mullions get less); **loudness** high (good play of forms and volumes, open and closed, new textures (plants and gravel)); healthy **pitch** (some shading, but no overhead plane)



University of Pretoria – Meyer, M G (2005)

Some of the conclusions I have made of what a melody/movement wants to do in the context I have studied it in Pretoria follow now. What has to be noted here is that the melody is always contextual, differing, albeit only slightly, with the geographical, climatic, social, political and cultural practices it passes through. In some areas, movement might be concentrated in covered and protected areas; in other circles the open might be a ground for the melody to move along harmoniously. The research for what a melody/line of movement wants to do, i.e. move about harmoniously, lets me conclude:

- a melody wants to be protected. This means a solid or permeable (but existent) roof plane
- to make the melody even more harmonious, wall planes, preferably at least one of them permeable, are applied
- a soft roof plane (e.g. tree canopy) softens the edges of the melody and decreases the velocity
- it likes to move through naturally proportioned spaces, spaces containing nature's harmonies. Again, the building blocks of nature, like trees and their canopies, provide these proportions without even trying to enforce them.
- a "humanisation of space" is necessary to let it move through a designed space and into a building. Employing a proportioning system that represents these human and natural proportions, like the modulator, can do this.
- softly, rhythmically and naturally filtered light increases the rhythm and softens the melody. This means it moving in shade, but with rhythmic openings (again created by trees or buildings) and not solid building mass with hard edges
- it wants a continuous wall plane on at least one side to bounce off from and guide the movement and not make it disappear in many undefined little corners
- it wants to have a good mixture of volumes, sense that there is some continuity behind the façade without telling it directly where to go.
- it wants a sense of transparency that invites and intrigues without giving away the whole building immediately
- it wants to have logical landmarks from where to come and go and orientate itself according to a distinct hierarchy.
- it wants to follow logical paths along this line and have all entrances and exits sit on the line naturally

MARABASTAD EXAMPLE

Examples of these conclusions have already been seen in the analysis of the walk towards the site, but this can also be seen in many other places in the city. It was thus decided to go to Marabastad, just N-W of the city centre and look for examples of what constitutes harmonious movement, what kind of planes are needed to protect a melody, to make people want to sit and work there. Marabastad also has a fine example of a dip next to the road where melodies/movement flow down and offer a protective wall plane. Lots of activity occurs on the dip and even more on the square behind the dip.



lots of activity will take place under a simple roof plane - in this case the best roof plane of a permeable roof canopy

again, the simplest of roof planes will already ensure the protection of a melody/movement and ensure that people feel comfortable and want to gather there



University of Pretoria
 dip in the site and activities on the slope (with a little roof plane of an umbrella)

University of Pretoria
 roof plane over trading facilities ensures protection of melody/movement and people want to gather there



dip in the site and activities on the slope and on the lower level, where another roof plane (collonade and umbrellas on the square) protect the melody/movement and make people gather there

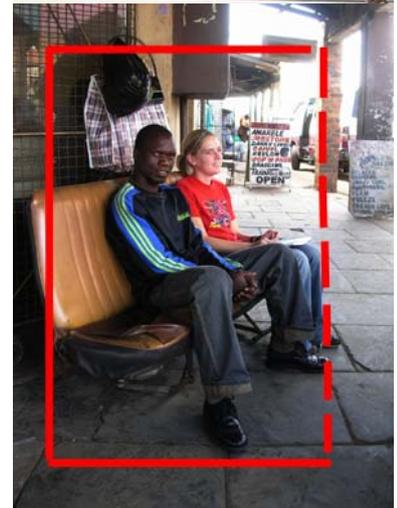
simple roof plane only requirement for protection of melody/movement and people will want to gather there



seating is a requirement under most roof planes to make the comfortable person feel even more inclined to stay there



protected roof plane by means of collonade and trees next to it to protect melody/movement and make people want to walk along there



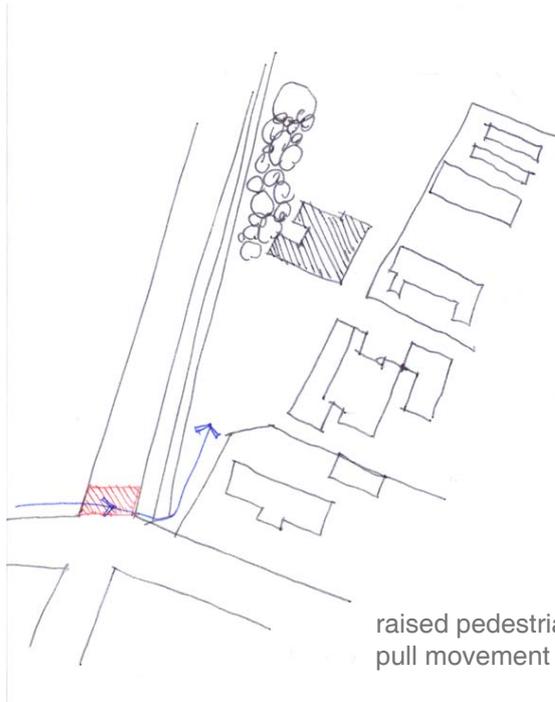
These thus are the characteristics of spaces that aid harmonious movement. A series of spaces that have a balance of these will be a series of spaces that draws people in and makes them want to be in that space.

With this in mind the design of the building can occur. The first step is to set out the movement on and around the site. The spaces around the site have been analysed in their potential to aid or deter movement and now it remains to add to these and look where new systems can be added. The first prerogative is to tap onto the main movement system coming from the station and going down Jacob Mare Street. This is where the main source of pedestrians lies which will feed the site. The melody/line of movement that has been generated was analysed and the spaces identified that make this melody/line of movement rise or fall.

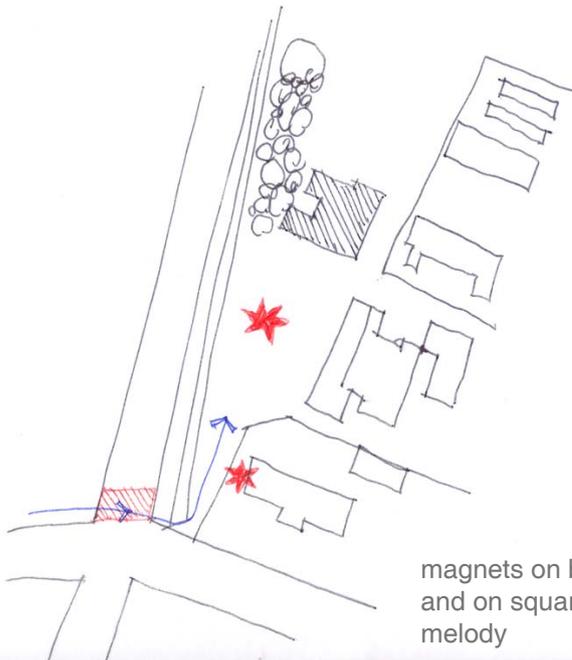
The biggest design problem will be to draw this melody/movement over Nelson Mandela Drive, i.e. to draw pedestrians over that wide street where, at the moment, there seems to be nothing that calls them over to the other side; the huge residential block even pushing many away and leaving them with many possibilities to get to Sunnyside, which is the main goal of most pedestrian movement at that corner. A magnet is needed on the other side to conglomerate movement on that corner. Once the movement has reached that corner, some possibilities still exist of where people are to go.

This is where that natural dip in the road becomes such a feature on the site. It is seen like a threshold of a waterfall with all melodies/movement flowing down and converging on that square. The slope also becomes very important in providing a wall plane along the site, especially important in protecting the melody/movement from the busy Nelson Mandela Drive. Another magnet is thus needed on the square itself to draw this melody/movement down. Again, most movement on that S-W corner wants to exit the block on the N-E corner and so a path has to be found through the precinct.

At the moment most movement takes longer and more meaningless routes, except maybe for the path through Gerard Moerdyk Street, which is already very harmonious and might be tapped into.



raised pedestrian crossing to pull movement over



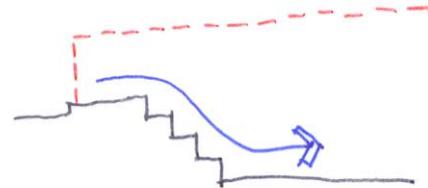
magnets on building facade and on square to attract melody

The following design decisions were taken, while keeping in mind that the melody is nothing else but the line of movement of people and where the melody moves harmoniously is where people feel comfortable:

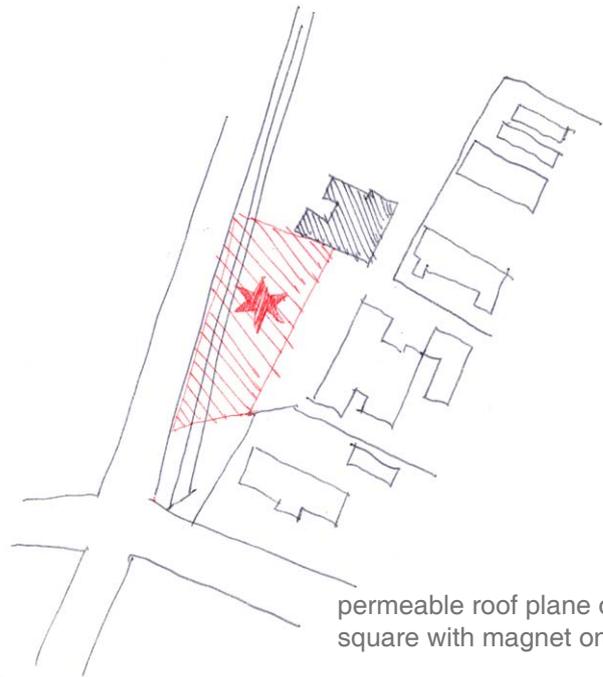
- install a raised pedestrian crossing between the western side of Nelson Mandela Drive and the eastern side to ease the melody over the road more harmoniously. This also goes in line with the MDC framework that envisages raised crossings to enhance pedestrian movement. This crossing would also mark the entrance to the corridor and, similarly to Newtown where an identity is created with the lighting that stays the same throughout, one could see the whole corridor to have a raised road, easing pedestrian movement over and giving that corridor the identity of being the one with the raised road.
- use the Western façade of that difficult block on the S-W corner to become the magnet itself and, in line with the program of the building, fasten a screen on the outside and project the public part of the filming from it. This will create an

extremely high pitch and loudness, all the factors needed to draw the melody over the road and give it some life again.

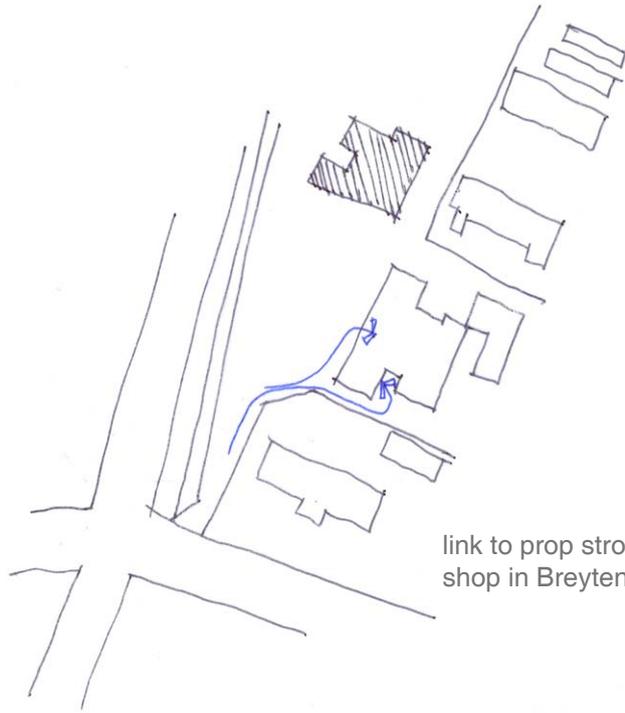
- keep the dip in the site and stay with the submerged floor plane - the perfect site for a melody to converge and be protected by the wall plane all along the W side.
- keep the slope's edge permeable and make the wall plane permeable to still allow any melody passing the site to move over onto the square. This will be done with the addition of seats on the slope and no wall along the top western side of it.
- provide a roof plane that is also permeable over the square, another condition for harmonious movement of a melody. This will be done with some kind of shade net or removable roof structure.
- put lots of movement on the square itself, another good magnet for the melody to be drawn over the road and down the slope. This could be in the form of some public activity or just providing the parameters for something to happen, which then usually will.
- keep some kind of link to the store room and prop



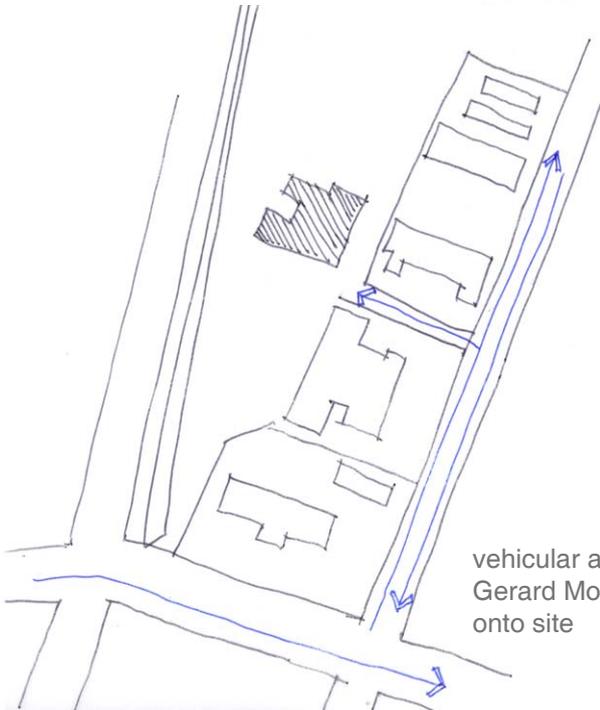
keep natural slope and add seating and permeable roof and wall plane for natural flow of melody down the slope and protection of it



permeable roof plane over square with magnet on it



link to prop store and workshop in Breytenbach Theatre



vehicular access from Gerard Moerdyk Street onto site

store of the
Breytenbach
theatre

leave vehicular access on
the current position on the
eastern side with either
the possibility for on-site
or basement parking.

