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The Instrumentality of Gibson's Medium as an Alternative to Space

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Volume 14 Issue 3 (September 2012) Article 5
Raymond Lucas,
"The Instrumentality of Gibson's Medium as an Alternative to Space"
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Abstract: In his article "The Instrumentality of Gibson's Medium as an Alternative to Space" Raymond Lucas analyzes the alternative to space presented by James J. Gibson and the potential role of narrative in a more holistic process of design. The concept of space exerts a powerful influence on architecture, urban design, and other disciplines concerned with the environment. Many recent critiques have measured space against place, recognizing the deficit in memory and identification within space, but the problems with the concept are more deeply felt. Understanding the medium rather than space offers architects and theorists opportunities to examine the role of the full range of senses, weather, and temporal effects such as the seasonal or daily cycle, and even technological modalities such as surveillance, safety, and connectivity. This shift in understanding allows for a fuller representation of architectural experience. Rather than seeing architecture as firm, solid, and complete, it is possible to represent an architecture of context, conditionality and flux. Architecture is experienced through all of our senses, active and attentive, as well as distracted and passive. Lucas demonstrates aspects of the sensory notation system and its associated narration of space in urban design.

Raymond LUCAS

The Instrumentality of Gibson's Medium as an Alternative to Space

In urban and architectural design, there is a bias towards the visual. This is translated into the forms of representational graphics used, and the ways in which the urban environment is designed. Urban designers from Kevin Lynch (1960) to Gordon Cullen (1961) have designed with the visual in mind: elements such as visual variety, landmarks, and cohesion figure prominently in their theories of the city, as well as their techniques of serial vision and the imageability mental maps. My study is indebted to a number of sources and builds upon conventional approaches to design. One particularly instructive form of inscriptive practice is the movement notation designed by Rudolf von Laban (1971): whereas other forms of notation attempt to show what a dancer looks like to an external audience, Laban sought to represent the forces internal to the performers themselves, designing a set of instructions on how to achieve a form rather than simply describe what it looks like.
Of particular interest in Laban's system is the efficiency of the Effort/Shape notations (Dell). The latter are an additional element used to depict certain qualitative aspects of a movement and are added to the main notation wherever appropriate. The arrangement of axes in the matrix allows for a set of oppositions to be established within a tight set of descriptor terms. These terms have a common currency for the users of the system, so that they remain suggestive at the same time as being specific. In my study I some of the issues related to the sensory notation system I have developed (see Lucas, "The Sensory," "Designing"; Lucas and Mair; Lucas, Mair, Romice; Lucas and Romice). First, however, a brief explanation of the system and how it works is required. The system's implications are radical in terms of the architect's conceptualization of the environment as it proposes a shift from a neutral, geometric understanding of space towards an appreciation of the deeply contextual nature of mediums and surfaces (see Gibson, *The Ecological*; see; see also Ingold 115-35). This also has an impact on the design process, as the integration of non-traditional practices presents us with interesting but difficult issues to resolve.

The notation allows the recording of different sensory experiences in the same format. This enables us to create a catalogue of experiences as samples or patterns (see Alexander, Ishikawa, Silverstein) following the long tradition of architectural folios and pattern books (see Pai). This catalogue enables us to critique and diagnose problems in the sensory environment; it also provides a basis for the replication or amendment of an existing and already-understood urban environment. The system affords use by individual designers working on their own projects, but also scales up to community engagement exercises, and potentially even to the crowd-sourcing of data from a large, anonymous sample (see Thwaites and Simkins for more on how strategies such as this integrate into the architectural and urban design processes). The sensory notation system has several key procedures: the ordering of perception (a fairly simple set of instructions regarding full attendance to the scene at hand); the plotting on orthographic drawing; the construction of sensory priority notation; the construction of corroboration notation; the construction of temporality notation; the assignment of descriptor terminology; and the writing of a descriptive account. Working with existing notational systems is not only important to the utility of Sensory Notation, it also recognizes the continuing role of the conventional drawing apparatus in urban design projects. The combination of plan and section is a particular focus, as the former is crucial in depicting the relative positions of objects and their relations to one another, whilst the latter describes the volumetric character of a space. Plotting routes and places on these drawings contextualizes the notation and marks its relevance in an efficient manner. It is worth noting that this is convenient as many of the aspects of the sensory environment are left out even here. Transitions from one condition to another, for example, are not shown accurately, so that the relative sharpness or gradation of a transition is not part of the graphic (see MacEachren).

The main graphic step of sensory notation is the sensory priority, which is represented in the form of a radar chart or spider diagram. These diagrams make it possible to simultaneously represent various parameters, which in this case helps to answer the question as to which senses are dominant and excited, and which ones are lacking in stimulation. For the purpose of an urban design notation, I have taken James J. Gibson's idea of perceptual systems (see Gibson, The Senses) and adapted it

slightly whereby Gibson's theory of sensory perception is modeled as an active, seeking sense organ rather than as the passive receptor of stimuli from the external world.

visual	aural	tactile	kinetic	thermal	chemical
dark	high pitch	static	strong	hot	weak
bright	low pitch	mobile	light	cold	intense
saturated	quiet	rough	free	dry	stagnant
neutral	loud	smooth	bound	wet	fresh
perspectival	clear	light	indirect	natural	musky
flat	reverberant	heavy	direct	artificial	putrid
intimate	vocal	porous	level	ambient	floral
vast	non-vocal	resistant	graded	source	fruit
solid	natural	hard	sustained	radiant	spice
void	artificial	soft	quick	convective	resin
detailed	attack	warm	crowded	constant	meaty
blank	decay	cold	empty	responsive	oily

Figure 1 Chart of perceptual systems used in sensory notation along with descriptor terms

Given the focus necessary for the urban environment, we have the following six perceptual systems: visual, aural, tactile, chemical (taste/smell), kinetic, and thermal.

Figure 2 Radar Chart (empty) ©Raymond Lucas

In this example, there is an even spread from high to low priority. This is the standard model, in which one sense is prioritized and others fall neatly into the lower categories.

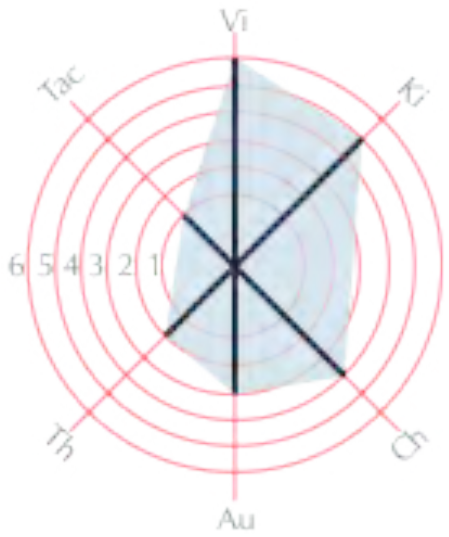

Figure 3 Radar chart (standard 1-6 distribution) ©Raymond Lucas

Other results are possible, such as the one below, in which the environment displays a paucity of sensory excitement. As such, this banal shopping mall space in Dortmund might be expressed with each system as 1 or 2.

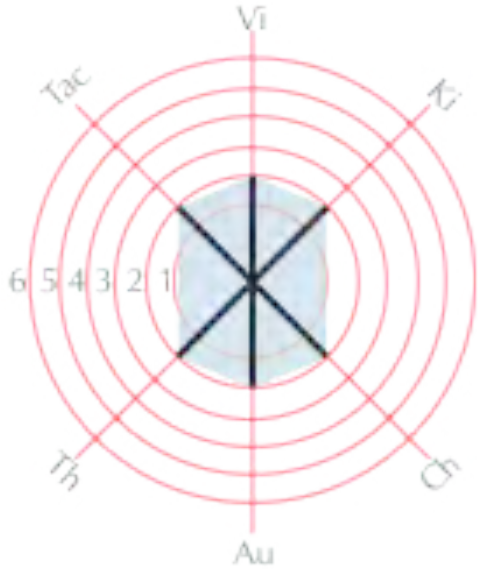

Figure 4 Radar chart (low level of excitement) ©Raymond Lucas

The opposite is also possible, of course, as is illustrated by Shibuya Crossing in Tokyo, where each sense is competing for attention: there is a lot to see, hear, even smell, taste, and move through.

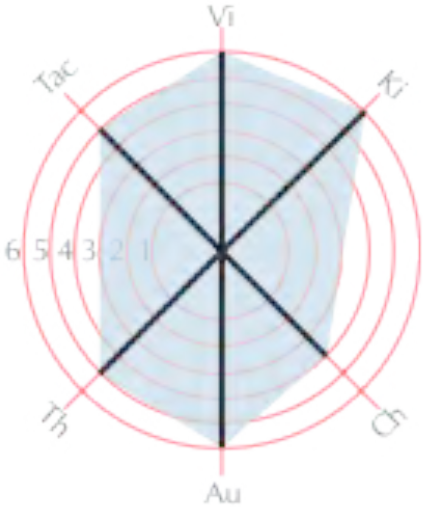

Figure 5 Radar chart (high level of excitement) ©Raymond Lucas

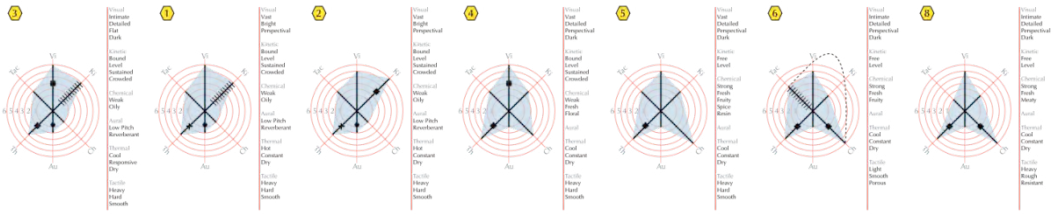

Figure 6 Comparison of radar charts (geometry) ©Raymond Lucas

As a short-hand, each radar chart provides a simple geometrical figure. The small, compact notation is a space where little is happening, where the larger shape indicates a vibrant space (possibly too vibrant, resulting in a sensory overload). Excessive spikes show that a certain space privileges particular sensory experiences over others.

Additional qualities of this sensorium can be noted on the priority chart. The most important of these qualities is corroboration. Put simply, an experience is richer when there is a level of overlap between the senses. The unexpected nature of a voice rendered ambient by a railway station PA system, for example, is a denial of this quality.

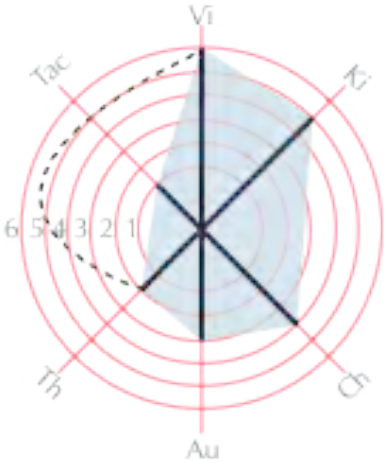

Figure 7 Corroboration ©Raymond Lucas

The relative temporality of an experience is also important to consider. Rather than adopting the measured time of physics, we are dealing with an experiential and contextualized temporality, but the logic of a space can be quickly described if there is a singular event causing a sensation (a church bell, for instance), as opposed to something constant (such as a car alarm), or a sound in the background (with distant traffic noise as a case in point).

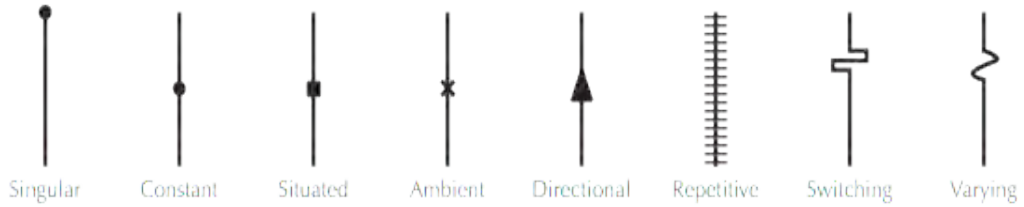

Figure 8 Temporality key ©Raymond Lucas

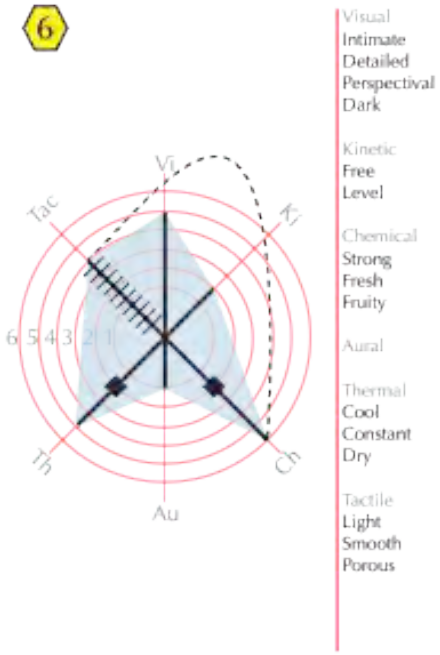

Figure 9 Temporality notation example ©Raymond Lucas

The graphic of the priority notation can be used in several ways. Across a route or series of positions in a place, the notation can diagnose problems, and identify strong and weak perceptual systems. A dull route might be livened up with fragrant plants, for example, which provide visual and aural elements as well as thermal qualities such as shade. Layering can also be used to process and bring together the results from a variety of respondents investigating the same space, so as to establish a discussion point for community-based projects, in which case asking the questions in the right way can be the biggest hurdle.

A short-hand of descriptor terms is used for each sensory priority chart, giving a little more information about the qualities present in a certain environment. The terminology is deliberately neutral and avoids metaphors as much as possible. As is the case with similar geometric arrangements (see Norberg-Schulz), radically different spaces may nevertheless yield the same arrangement of sensory priorities. The descriptor terminology provides a short-hand for the depiction and understanding of these qualities, and encourages the notator to think in terms that bypass the visual metaphor so common to descriptive language. As Gibson argues, "If we understand the notion of medium … we come to an entirely new way of thinking about perception and behavior. The medium

in which animals can move about (and in which objects can be moved about) is at the same time the medium for light, sound, and odor coming from sources in the environment. … Substances differ in all sorts of ways. They differ in hardness or rigidity. They differ in viscosity, which is technically defined as resistance to flow. They differ in density, defined as mass per unit of volume. They differ in cohesiveness or strength, that is, resistance to breaking. They differ in elasticity, the tendency to regain the previous shape after deformation. They differ in plasticity, the tendency to hold the subsequent shape after deformation. (Gibson, *The Ecological* 17-20).

Traditionally, the objects considered by architecture have tended to be hard, dense, cohesive – in other words, fixed and crystalline. This has promoted an idea of space as something left over between the hard structures of the city and building. "Consider first the difference between the terms used in describing what I have called the layout of a habitat and the terms used in geometry. Surfaces and the medium are ecological terms; planes and space are the nearest equivalent geometrical terms, but not the differences. Places are colorless; surfaces are colored. Planes are transparent ghosts; surfaces are generally opaque and substantial. The intersection of two planes, a line, is not the same as the junction of two flat surfaces, an edge or corner. I will try to define the ecological terms explicitly. The following terminology is a first attempt at a theory of surface layout, a sort of applied geometry that is appropriate for the study of perception and behavior" (Gibson, *The Ecological* 33). In addition to marking the distinction between space and the medium/surface, Gibson describes the importance of this concept for his firmly contextualized image of the environment. The latter image is of particular use to the study of the sensory experience of the urban environment. This article suggests a radical departure from the conventional model of urban and architectural design. By changing the terms of engagement with the environment, new forms of contextually embedded design become possible.

Gibson's contrast between the snapshot vision tested by traditional experimental psychology and the reality of our ambulatory visual perception in the environment is instructive as to the need for the narrative element to supplement sequences of notations. Gibson considers the structure by means of which one must stitch these sequences together (*The Ecological* 192, 303). This aperture vision is akin to the notational snapshots taken at points along a route or place, in which the flowing narrative has more in common with Gibson's ambulatory vision, indicating that there might be a further notational step that is required to render this graphically: "Ambient vision is what you get from looking around at the scenery. Ambulatory vision is what you get from walking around the countryside" (*The Ecological* 303). What this approach reveals is the difficulty of integrating it into the graphic conventions of architecture and urban design. These built environment disciplines employ graphic methods to describe space rather than the specificity of place or the cognitive model provided by Gibson's medium and surfaces. This shift presents both a problem and an opportunity: how do we design for this alternative conceptualization of space? How does design move from its abstracted Classical origins towards contextual and contingent responses to sides?

It is clear that language is equipped to deal with this highly experiential version of events, and that it is essential to describe the sensory experience of a place. This emphasizes the element of description included in the sensory notation system, but this narrative should be explored fully, rather than simply being accepted as a given. As Mieke Bal argues, description can be mobilized as subversive reading. The narrative and description offer many opportunities to record sensory experience. Coupled with the notational system, the description becomes very specific and useful in the context of the design process. There is also a mode of observing and attending to the scene more fully that affords the sensory description to accurately reflect what it is that the designer as idealized observer is focusing on. There are of course several schools of narrative theory, many of which are identified, for example by David Bordwell in his *Narration in the Fiction Film* (1985). The mimetic theory of film narration concentrates on the imitation of life (Bordwell 3). This is arguably the mode in which the architect works when he describes an existing situation in order to exploit its arrangements and qualities for another place, another project. The mimetic description presents itself as a reflection of life itself, not as a proposal for action. The mimetic film, then, attempts to erase the process by which it is made, so as to seem a seamless presentation of a real situation. The diegetic theory of film (Bordwell 16), by contrast, is particularly relevant to, for instance, the fiction film, as it has come to refer to the fictional world and the ways in which it might be validated. This propositional space of the diegesis, including extra-diegetic information, can be understood to have a valid place as the narrative

space for architectural design. Bordwell's analysis is largely based on the work of Russian Formalist writers such as Jurij Tynianov, Viktor Shklovsky, and Evgeny Tomashevsky (Bordwell 48). Authors in this movement understood narration in terms of describing the actual plot (*syuzhet*) and the world in which it happens (*fabula*), and reflecting on the way in which that is done (style, or, in Barthesian terms, excess).

Discussing narrative forms presents the designer with a range of options on how to approach the task of writing, and the mode of the narrative might be either mimetic or diegetic. How, then, might an architect support an outlandish diegesis, for example? In a fantasy or science-fiction film, this might happen with the use of extraneous detailing, events suggested at or happening off screen. Designers may also want to set the scene for their own diegetic case so that the building occupier and user feels more part of another world when in that space. Bal rejects both formalism and structuralism in narrative theory in favor of an approach based on the idea of motif and discerns three elements in the structuralist narrative theory of Roland Barthes: *indice* (thematic indication), *catalyse* (filler), and *noyau* (kernel). For Barthes, the descriptive text cannot form part of the *noyau*, but may be used as filler and thematic indication. This, of course, presupposes that a kernel is possible. This is a deeply problematic idea, as it indicates a hard core that represents the real essence of the narrative act (or indeed, the design) — something that runs counter to the notion of narratology itself, which is then rendered entirely in the negative (that which is not narrative) rather than expressing the functions of constituent parts. This process-based description is related to material culture, and is wholly embraced by new developments in the field. The description of objects on the basis of material, form, texture, and other physical characteristics is increasingly abandoned for an approach that presents items in terms of a series of social relations that describes the trajectory from the gathering of materials to manufacture, use, and eventually disuse and discarding. The sample narratives below are taken from my field work in the Indonesian capital Jakarta (see Cairns, Lucas, Mackaness, Tanasescu), a rapidly developing city where informal development exists alongside new gated communities, golf clubs, and shopping malls for the new middle classes. As such, a transect through the city shows a wide range of urban and peri-urban conditions in challenging climactic conditions of extreme heat and frequent flooding:

The Rice Field

Just one street behind an up-and-coming residential suburb lies a wide-open space with rice fields.

The road is muddy and marked by large puddles. The traffic is moderate, and a green, grassy verge is built up on each side of the road. The verge drops down half a meter, and irrigation channels cut into the field, further down into the sodden earth.

Walking along the road, I see that the field is large, with forests bounding it to the left and right, and vanishing far into the distance is a long strip of rice plants. The channels are only subtly differentiated to this view, but a pattern of strips of rice can be seen. Small huts are placed around the field, one of which is halfway down the field, and in the centre.

It is harvesting time, so the rice is tall and ready to be picked. This means that it is ready for birds to come and claim it for their own too, so noisy sheets of plastic and textiles have been strung up, functioning as scarecrows, the slightest gust of wind catching the fabric like sails, and causing whipping and cracking sounds to fill the air. These also provide a visual rhythm, as the wind is just beginning to stir. The sheets are made from large election banners, in a wide variety of bright colors and patterns, set against the deep greens of the field and surrounding trees.

Stepping down from the road, I find a steep slope, from the firm beaten earth of the track down to the sodden mud of the field, saturated with water from the drainage channels.

There is a freshness to the air out here, even though it is still hot, humid, and polluted, but the sources are less immediate away from the congested city streets. There is another reason for the air's freshness and clarity, which makes the colors more vibrant: the coming thunderstorm. A pressure is building up, and the skies are darkening.

The rain starts, the wind is picking up, and the air is clearer and fresher. Heavy spots of rain begin to fall — not many at this stage.

Walking across the narrow earthen walkways, flanked by irrigation ditches on each side, I make my way into the field. The soil is soft, and I sink into it with each step. The walkway is around half a meter wide, but there is a deep-green, spinach-like crop in the middle of the path. Mindful of my step, I gingerly keep to the side of the walkway, making sure not to trample the broad leaves.

The roadway behind me remains moderately busy with pedestrians, small vehicles, and motorbikes passing slowly. The path ends, and the rice paddy itself is not passable. I climb towards the wood at the side of the field and edge my way along between the trees and enormous leaves. Looking back over the field, the surface is undifferentiated, and the channels merge into the rice paddies, as do the paths between the fields. A simple rich field of green stretches in front of me, and I see a small fenced area ahead.

Heading for the fenced area of the field, I find another path into the rice.

The rain is getting heavier now, but I pause for a while, taking in the scene, the colors, the relief from the heavy traffic noise of the city, the fresher air.

The pathways are covered with low grass, slightly trampled into the mud and yellowed. As the rain gets heavier, the earth becomes slippery and muddy. The wind is picking up too, and a slight gust suddenly catches the "scarecrows," lifting the fabric banners and blankets high into the air. A couple of cows amble about to the other side of the field, not bothered by the deteriorating weather.

The fields in the distance are marked by the banners and scarecrows, which gives the view a good depth of field. On top of this, the background has the de-saturation of distance, increasingly pale green layers of foliage, and tall power line supports beyond, suggesting that the city is close to the field.

As the weather deteriorates, I decide to take cover in the small hut in the centre of the field.

The rain has turned into a thunderstorm, with heavy rain accompanied by distant rumbles of thunder and flashes of lightning illuminating the entire sky. The sound of the heavy downpour breaks the silence of the field, drowning out what little traffic noise there was. A screen of rain breaks up the visual field, and the deep vibrant greens of the initial scene are further de-saturated by the sudden increase in the rain.

The small shelter is constructed from timber and bamboo, with a thatched roof hanging over the supports. Rain gathers and drips constantly from the edge of the roof. The darkening sky signals a worsening of the storm. The lightning bolts appear more frequently now, and the gap between the thunder and lightning is decreasing significantly, indicating that the storm is moving closer.

The rain gets heavier again.

With the storm overhead, the color has drained from the scene completely and I do not dare to move from the spot of shelter I have. The sound of the rain is constant, with regular cracks of thunder overhead. (Cairns, Lucas, Mackaness, Tanasescu)

Golf Course

March 2009, Mid morning.

Arriving by taxi, we pull in to the stepped entrance area by way of a security gate, stopping to allow the car boot to be opened and a swift check of the underside of the car with a mirror on a long pole. The car then takes a tight turn around a large fountain with epic mythological figures in the centre. This has the desired effect of cooling the air around this threshold zone. [1]

We are greeted by concierge and security staff who quickly assess our suitability to be in this area [2]. One of our party who speaks Indonesian, speaks to the staff, and we ascend the rather grand staircase, a transition from the bright light of the outdoors into a dark, vast interior space [3].

This space is cool, but open to the outside rather than sealed and air conditioned. The

open pavilion is flanked by golf club rentals and shop to the right, with reception facilities to the left. An open void sits in the centre of the space, and one must descend again towards the club-house [4].

In the club-house part of the pavilion, breakfast is being served in a large open restaurant area. An island with buffet items sits in the centre, and seated golfers enjoy a hearty breakfast before their day on the greens. Uniformed staff quietly serve the golfers and their families. [5]

Cutting through the restaurant, the pavilion opens out to a terrace overlooking the practice ranges and the golf course proper behind it [6]. Winding paths meander through the space, large bodies of water with small islands are apparent, the grass is bright green and well tended, the planting lush and established looking. Once on this terrace, the heat and humidity hit with full force, something of a shock after the relatively cool and dark interior spaces. In light of this, I pause to apply sun-screen before venturing out into the open. It is a hazy heat, which gives a premature de-saturation to the distant tree line.

The greens are another set of steps downwards [7], broad and grand, the club-house building is designed for visibility and as a sign of luxury and wealth as well as to fulfil the functions designated for it. A path leads down to the practice range, so we take this gently curving, downward slope of careful tarmac path edged with drainage blocks. The driving range [8] is a covered pavilion, regular columns in a deeper green topped with a tiled roof, pale pink painted tubular steel roof beams exposed on the underside.

This roof gives limited protection from the heat, and the paving underfoot remains consistent, with the practice spaces demarcated by rectangles of deep green artificial turf with tees built in. Chairs occupy the rear of the space, as keen golfers practice their swing at the front, facing the large artificial lake.

The lake has a picturesque curve to it, with the accentuated character of golf courses apparent. Markers indicate the distance from the driving range, all punctuated by the swooshing sound of the golf clubs ending in the 'tok' of striking the ball. This sets up an aural rhythm to the practice range, interrupted by only some ongoing conversations in relatively

that we are researchers and architects, but obviously doesn't want to cause a scene by literally escorting us from the golf club. This is private space, controlled and open only to certain clients, specifically for the purpose of playing golf. As such, movements in the space are restricted to a set allowed or suggested by the rules of the game. What, in purely morphological terms, might be termed parkland is only available for the playing of golf, not a picnic, or a watercolour painter, a walker, or even just sitting for some respite from the city.

This control of movement is particularly notable, despite the wide open spaces, movements are confined and restricted to this set of golf swings, and point to point navigation in order to find the ball. Stepping out of these boundaries even to observe and take photos is an immediately obvious act, and seen as threatening to this oasis from the city.

With our escort safely behind us in case we forget the way out, we encounter a group of seven or eight caddy girls sitting by the edge of the path. Our attempt to speak with them is shyly rejected, however, presumably aware of the security attention we have attracted. An informal space has been created by this group, however. Resting from lugging large golf caddies about and providing support to the golfers, they are pausing and chatting amongst themselves. It's fairly clear from this gathering that there is no space given over to them for this purpose, so parking their caddies on the edge of the path helps define an area for their relaxation.

We make our way back to the club house and explore the area nearby for some time before returning for lunch. Sitting inside the clubhouse is a different experience from passing through as we did in the morning. The

Figure 10 The Golf Club ©Raymond Lucas

The Golf Club

Arriving by taxi, we pull into the stepped entrance area by way of a security gate, stopping to allow the car boot to be opened and the underside of the car to be checked with a mirror on a long pole. The car then takes a tight turn around a large fountain with mythological figures in the center – an ornament that has the desired effect of cooling the air around this threshold zone.

We are greeted by concierge and security staff who quickly assess our suitability to be in this area. Stephen, one of our party who speaks Indonesian, talks to the staff, and we ascend the rather grand staircase, a transition from the bright, light outside into a dark and vast interior space.

This space is cool, but open to the outside rather than sealed and air-conditioned. The open pavilion is flanked by golf-club rentals and shop to the right, with reception facilities to the left. An open void is in the centre of the space, and one has to descend again towards the club house.

In the club-house part of the pavilion, breakfast is being served in a large, open restaurant area. An island with buffet items sits in the centre, and seated golfers enjoy a hearty breakfast before their day on the greens. Uniformed staff quietly serve the golfers and their families.

As we cut through the restaurant, the pavilion opens out to a terrace that overlooks the practice ranges and the golf course proper behind it. Winding paths meander through the space, large bodies of water with small islands are apparent, the grass is bright green and well tended, the planting lush and established-looking. Once I am on this terrace, the heat and humidity hit me with full force — something of a shock after the relatively cool and dark interior spaces. Therefore, I pause to apply sun-screen before venturing out into the open. It is a hazy heat, which gives a premature de-saturation to the distant tree line.

The greens are another set of steps downwards, broad and grand. The club-house building is designed for visibility — as a sign of luxury and wealth — and for fulfilling the functions designated for it. A path leads down to the practice range, so we take this gently curving, downward slope of careful tarmac path edged with drainage blocks. The driving range is a covered pavilion, in which regular columns in a deeper green are topped with a tiled roof — the pale pink tubular steel roof beams exposed on the underside.

This roof gives limited protection from the heat, and the paving underfoot remains consistent. The practice spaces are demarcated by rectangles of deep green artificial turf with tees built in. Chairs occupy the rear of the space, as keen golfers practice their swing at the front, facing the large artificial lake.

The lake has a picturesque curve, with the accentuated character of golf courses apparent. Markers indicate the distance from the driving range, all punctuated by the swooshing sound of the golf clubs ending in the "tok" of striking the ball. This adds an aural rhythm to the practice range, only interrupted by some ongoing conversations in relatively hushed tones. Periodically, a small rowing boat heads out into the lake, armed with a net to collect the vast clusters of golf balls bobbing in the water. The golfers do not pause to let this happen safely, blithely continuing to strive for the perfect swing.

We clamber out of the practice area over the grated storm drains and the greens instead of taking the steps up to the path. The carefully groomed path winds up and around the lake, with checker-boards of blocks set in to the perimeter to allow for drainage. The climb is relatively steep here, but we wind around, gaining a long view of the lake, and are drawn round the course, which reveals and hides its vistas with deliberate care.

Static golf buggies are located next to groups of golfers on the greens. Caddy girls in brightly colored costumes surround them, clutching umbrellas and golf clubs that are sometimes far too unwieldy for them to handle. Attention from the girls clearly flatters the golfers, all of whom maintain a respectful distance from each other.

Their golfing outfits and those of the caddy girls (bright pink and green with long white socks) play off against the rich greens of the grass and surrounding foliage, adding a carefully selected palette to the undulating landscape.

As we walk further into the course, vistas continually open up, each with a tree line in the distance to lend an edge to the area. The scene of golfers and caddy girls is repeated at regular intervals, and as we descend gently to the next part of the course, a discreet security presence makes itself known. We are rather conspicuously not playing golf, so we are not really following the rules of this place. The security guard, in his uniform and quiet motorbike, approaches us to find out what we are up to. He is suspicious, and, after a discussion, we decide by mutual agreement to leave.

Turning around to head back to the clubhouse, we walk slowly uphill, appreciating that there is a different set of views for us; the wide-open spaces of the practice range and the lake seem quite at odds with the rest of the city.

After walking for five minutes, we notice that the security guard is following us from a very precise distance. He does not quite trust our explanation that we are researchers and architects, but he obviously does not want to cause a scene by escorting us away from the golf club. This is private space, open only to certain clients with the specific purpose of playing golf. As such, movements in the space are restricted to a set that is allowed or suggested by the rules of the game. What, in purely morphological terms, might be termed 'parkland' is only available for playing golf — not for having picnics, watercolor painting, walking, or even just sitting down for some respite from the city.

This control of movement is particularly noticeable: despite the wide-open spaces, movements are confined and restricted to the set of golf swings and point-to-point navigation to find the ball. Attempts to step outside of these boundaries — even if only to observe and take photos — stand out, and they are perceived as threatening to this oasis from the city.

With our escort safely behind us (in case we forget the way out), we encounter a group of seven or eight caddy girls sitting by the edge of the path. Our attempt to speak to them is shyly rejected, as the girls are presumably aware of the security attention we have attracted. An informal space has been created by this group, however. Resting from lugging large golf caddies about and providing support to the golfers, they are pausing and chatting amongst themselves. It is fairly clear from this gathering that there is no space given over to them for this purpose, so parking their caddies on the edge of the path helps to define an area for their relaxation.

We make our way back to the club house and, for some time, we explore the nearby area before returning for lunch. Sitting inside the clubhouse is a different experience from passing through as we did in the morning. The cooler ambience and the long strip of landscape outside suggest a slower pace of life. The skies are darkening now, and it is not long before the rains begin — a fierce shower lasting about half an hour. The aspect of our view changes, lines and edges are broken up by the pelting rain crackling as it hits roof tiles and spraying up from the ground. Despite this downpour, it is not noticeably cooler, but rather stickier and more humid.

After our lunch in the club house, we head to the car again, taking in the transitional zone as we wait for the car. Clearly, no one is expected to arrive here on foot, as there is no pedestrian access. To exit the club to the surrounding area, one has to cross the graded roundabout, past a security barrier and over the road, where there is a verge but no actual path.

We drive through the city with notably less motorbikes on the roads, and the temporary food stalls either shutting up shop or providing much-needed cover for exposed road users. People are well prepared, of course, as this weather is a regular occurrence — even if that preparation is improvised from tarpaulin. As the rain eases, the number of bikes on the road increases — a fairly direct correlation, as the heat of the day dries the city out swiftly.

The Village

Across the road from the golf club, new homes are being constructed in baroque styles, with ornamentation, columns, domes, and scrollwork. The plots are clearly defined by high walls and irregularly shaped gables, and the building work continues right up to this edge, the expectation being that when neighbors arrive, they will do the same. It is a pattern followed everywhere in Jakarta.

The development is progressing at a leisurely pace: only a few houses have been started, and long grass grows between each house. It is late morning, and oppressively hot. Insects can be heard in the distance, and the ground is, with the exception of a small ridge, completely flat.

In the distance, larger planting can be seen — wilder, larger leafed. I see a couple of trees here and there, as I walk between the houses. A few guys on motorcycles have gathered on the roadway, lounging in the heat. It is not obvious what their role is in this middle-class bastion, which comprises the golf course and new mansions.

Mindful of the potential dangers in the scratchy long grass — snakes, spiders, and biting insects — I try to find something that resembles a path. It is hard to find, but one area looks as if it has at least been walked on a few times, so I head down that way, landing my feet a little heavier than normal so as to scare any potential hazards away. I am glad to be wearing my long trousers and sturdy footwear, but in the end, the hidden animals are about as keen on me as I am on them.

The view of the rear of the new properties (in land cleared of older villages) is more bleak: blank grey perimeter walls with mansions peering over the top. They look out over more long grasses, stifling in the heat; it is hard to smell anything. At least, it is not smoggy here: the heat is not combined with the bad atmosphere of the rest of the city, but it is hardly clean country air either.

A buffalo ambles over to my left, quite out of place with the image of the golf course, and announcing the presence of the village clinging on, out of sight of the gentrified development.

Approaching the deep viridian green of this edge, I notice the land drops away at a sharp angle. Indeed, there is a set of steps leading down through the jungle of foliage, leading past a number of shacks made from timber, bamboo, clay tiles, and corrugated iron. The buildings hug the edge of the ridge, terraced, with narrow paths leading off the uneven muddy stone steps.

A river, brown-orange in color, calmly flows past the banks. A tiny pier is located at the foot of the steps, and I notice a rope strung loosely across the river. Long pieces of bamboo lashed together bob on the river banks as rafts. On the other side of the river, a number of people are washing clothes perched on the rafts, and one spry old man standing on a raft is holding the slack rope, and, hand-over-hand, pulling the raft quietly and smoothly across. A woman is standing on the far end of the raft.

We step to the side to allow her to pass us on the riverside, clinging as much as we can to the relatively sure ground of the steps. Another woman in a bright-red headscarf and maroon sarong is waiting behind us, laden with her washing. She passes on the opportunity to travel with us, and waits to get the raft to herself.

Boarding the raft takes a surety of footing, and we carefully balance ourselves at points along the bamboo platform. My knees feel a little shaky, so I decide to kneel down, damp knees and my dignity being a low price to pay for safe passage.

Given that it is such a large body of water, the river has the effect of subtly cooling the stifling air, making it much more bearable here — something of a thermal and atmospheric barrier from the harsh heat reflected up from the grounds around the golf club.

The repetitive knocking noises of a man repairing a raft on the riverside combine with the rhythms of the washing activity, soap and water being knocked out of the clothing before it is arranged on racks further up the river bank.

The village on this side of the river is much more substantial and more established. The rake of the ground is not so extreme here, and careful block paving weaves between buildings on short stilts with plaster walls, woven chicken coops, and bamboo fences. The terracing of the buildings sitting in dense forest makes for a particularly complex visual scene with a lot to take in. Goats and chickens roam freely, and people relax in the heat of the day. Washing is out to dry on timber and bamboo racks, brightly patterned and highly colored clothing arranged carefully.

Walking through the village attracts a lot of attention from local children, and there is chaos as a goat weaves its way through the gathered crowd. The buildings are more bigger and tightly packed here. A crisply-tiled mosque sits within the village, the call to prayer starting up.

Just beyond the village is a large patch of open ground, the exposed red soil characteristic of the land here. We climb down a narrow staircase, and then clamber up the soft soil. This clearing has rifts in it, deep valleys, and a powdered quality that makes it look as if it will crumble underfoot. Some makeshift goal-posts have been set up on the plateau at the top, surrounded by lush greenery and offering a prospect back over the village.

The land looks recently cleared, and some bamboo reinforcement rods have been placed in the rifts in the soil.

We cut through to the next path, beyond this field, and into another village. This place is less tight, with more space between buildings, and, here, too, there are obvious out-buildings. The road takes vehicular traffic, which is intermittent and mainly (but not exclusively) consists of motorbikes and scooters. The road is maintained, but obviously suffers from the rapid downpours followed by scorching heat.

A number of small dwellings hug the road, the open porches have furniture, and people are exploiting the public frontage to their homes. The open road offers little protection from the elements, however, and I stop at a bench to re-apply sun-screen. A house on the turn of the road has a small kiosk arrangement, and sells a wide range of supplies.

We continue up the hill. There is only tall planting on either side, and bikes racing back and forward. Eventually, the landscape changes, and freshly-turned red earth opens out in front of us. There is a plateau from which we can see a vast area, ripe for exploitation. The infrastructure has been put in place already: a dual carriageway and streetlamps with some planting. There is an eeriness about this arrangement, and bikes are joined by 4x4 vehicles intermittently racing along the road. Until recently, this was farm and village land, now intended for aggressive development. (Cairns, Lucas, Mackaness, Tanasescu))

Taken together, each of the elements above describe the sensory experience of a place. This description must be enacted according to a self-similar system, to allow for cross-comparisons between one designer's experiences of different places, or the experiences of many of a single context. Clearly, the sensory experience unfurls over a period of time rather than in a single point in time. Scents develop and acquire notes similar to the developing taste of a wine. There is the attack and decay of sound, and the accumulated tactility of a piece of rough ground.

Inserting temporality into design is not simply a case of score-based notations (although these remain an option), but of working with the relational and volumetric forms of design representation, to supplement them rather than attempting to supplant them. The plan and section have sufficient practical and cognitive flexibility to allow for this narrative, situated take on design that finds its origin in the attentiveness of our sensory experience as explored by Gibson.

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