

The Craig Patterson Writing Prize

The Challenge of Sustainable City Living & the Scale of Community



sophia

Entries for the Craig Patterson Graduate Writing Prize competition: The Challenge of Sustainable City Living & the Scale of Community

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AT SOPHIA WE ARE THRILLED to be publishing an anthology of the entries for our writing competition: 'The Challenge of Sustainable City Living and the Scale of Community'. We were contacted by UCL Grand Challenges earlier in the year and it has been a testing but ultimately fruitful challenge for us to organise the competition and to determine those entries which we thought deserved special recognition.

In order that the competition might appeal to as broad a range of entrants as possible, we deliberately encouraged a loose interpretation of the theme and the entries we received have indeed spanned a wide range of writing styles; from bullet points to stanzas of verse.

We're very grateful for the opportunity to cooperate with Grand Challenges and hope that this anthology will help to bridge between their Sustainable Cities initiative and UCL's research community at large. We would also like to thank all of the entrants for their creativity and patience during the judging process. We look forward to working with Grand Challenges again in the coming year.

Ed Long, Sophia editor

UCL'S GRAND CHALLENGES PROGRAMME IS DELIGHTED to have been able to link with the excellent Sophia magazine through the Craig Patterson Writing Prize competition, in memory of my predecessor - a great enthusiast for the potential of UCL to make a real impact in the world. Nicholas Tyndale (Director of Communications, Grand Challenges) and I were greatly impressed by the quality, innovation and variety of the competition entries and offer our congratulations to the overall winner, Olivia Hamlyn of UCL Laws, for her creative and visionary word picture of an imaginary city, Athanasia, in harmony with Nature, in 'Sustainable Cities,' and to runner-up Ilan Adler, of UCL Civil, Environmental and Geomatic Engineering for his compelling description of the challenges faced by Mexico City as it comes to terms with 500 years of dependency on, and depletion of, the aquifer on which it sits, in 'A Call for a New Paradigm.' UCL's Grand Challenge of Sustainable Cities (GCSC) is supporting and developing an exciting programme of activities for the current academic year, in consultation with a broad constituency of academics and researchers across the College. To date we have screened and held panel discussions on two films of relevance to the UN Climate Change Conference in Copenhagen - 'The Age of Stupid' by UCL alumnus Franny Armstrong, and 'Invisible' by Roz Mortimer. During the Spring and Summer terms there will be opportunities to attend and contribute to other GCSC initiatives, including 'Cities & Water,' 'Cities & Migration,' 'Planet U(CL) - Embedding sustainability in the university,' 'Healthy Cities,' and 'London 2061.'

Ian Scott, UCL Grand Challenges

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Sophia Judging Panel

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Grand Challenges
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Thanks to Tola Okogwu
for help with organising the
competition

A Call for a New Paradigm

Second prize

Ilan Adler, PhD Water Quality, Department of Civil & Environmental Engineering

ALLOW ME TO TAKE YOU on a virtual tour through Mexico, one of the largest Mega-cities in the world. Walk across its grand arches and plazas, through the traffic, the busy streets, the mildly polluted skyline that on happy occasions will allow a glimpse of mighty volcanoes on the fringes. And as you enter the *Zocalo*, as they call the main square, surrounded by overpowering structures and old temples, vestiges of an Aztec and Spanish past, notice the massive concrete floor furnishing the centre of the plaza, and, alas, it is lower than the ground-level of the buildings all around. And the Grand Cathedral, is it slightly bent to one side? Is this city, indeed ... sinking?

The answer is yes. It's been sinking for the last century at least, and in some parts reaching an alarming record of 9 meters! What happened? Let's go back a little.

Over 500 years ago, the Aztecs built a beautiful city here, right on top of a highland lake, which both enchanted and terrified the first Spanish soldiers to arrive. They never expected such a glistening jewel in the middle of this valley. Yet they were scared of water, especially at the military prospect of being 'trapped' among the many bridges which connected the city to mainland. So it happened that in the period of a hundred years after the ultimate and final defeat of the Aztecs, they started to drain the city, literally, by cutting through huge tunnels and channels that would cross the mountain valleys, slowly flushing out the lakes. At the same time, they set about urbanizing, paving and planning the new city following a European model (the only one they knew), with square plazas, cathedrals, cobbled stone paths, and the like.

The City, stubbornly insisting on living as if it were on common dryland back in Spain, suffered repeated floodings, as heavy rains in the valley would overcome whatever drainage the Spaniards had constructed, forcing them to make even greater and larger tunnels, authentic feats of engineering, in order to get rid of excess water. The problem was more or less settled by the 17th century, and finally Mexico, as it was now called, expanded freely as one of the important colonial capitals and seats of power. The old lake sadly shrunk to near oblivion. Little did these urban designers know that trouble was in the making: at least for the future generations.

But, as the Monkees once said: 'that was then, this is now...' By the beginning of the 20th century, with the advent of modern sanitation and sewage, the city needed an elaborate drainage system to get rid of the wastes generated by an ever growing population. Taking advantage of their highland situation (the city is located at roughly 2500m above sea level) it was decided that sewage would flow out of the valley by gravity, down to one of the many neighbouring rivers that eventually winds up in the Gulf of Mexico, on the Atlantic Ocean side. But Alas again, the city was already starting to sink due to the increasing over-extraction of water from its innards, and there came a point when the stinking, gravity-fed canals just 'wouldn't flow'. Urban planners and civil engineers of the time scratched their heads (as they normally do) and decided: 'hmm, let's *pump* it out'. Thus, expensive and energy-intensive pumping stations were installed to move human, and not-so-human, wastes along. This is the case to this day where, from the a place called the *Gran Canal* station, over 30 000 litres per second of sludge and rain are happily pumped up and over the hill, so that they can continue flowing down to the rivers, like in the good old days.

However, problems like this don't usually come alone. Around the mid 20th century, the city just could not keep on supplying over 2 million inhabitants, and growing, with enough drinking water from its dwindling aquifers. At the same time, the bit about sinking started becoming a real problem. Important buildings and historical monuments were looking warped, bent or in danger of collapse, including the Grand Cathedral and the golden *Angel de la Independencia*, among others. Thus another journey began: the quest for external sources of water. Like a giant squid, the city extended its arms to the countryside and started sucking out large amounts of water, timidly at first, one may say, and then boldly and greedily, witnessing what today is called by

the vexing name of *Proyecto Lerma-Cutzamala*. This gigantic network extends well over 200 km and actually lifts water 1000 meters from the lowlands into the capital city, consuming in the process the same amount of electricity as a medium sized city. When this project was completed in the late 80s, it was believed that finally the city would achieve some balance regarding water, but by then the population was already surpassing 10 million! Like most Latin-American capitals, people were flocking in from the countryside in hordes, trying to scratch a living in the city, repelled by miser conditions in the rural areas, and attracted by promising oil booms and so-called development.

It didn't work out. At the turn of the millennium the city simply did not have enough drinking water to meet its needs. Today, official figures estimate that at least one million inhabitants don't have access to the vital liquid, and around 7 or 8 million don't have what is known as 'adequate service', meaning frequent and long interruptions in the supply, or poor quality water, when it does arrive. The situation reached its peak this very year, 2009, when the City Government (paradoxically in the midst of a heavy rainy season) declared everything short of a crisis, as many neighbourhoods got their water service suspended for days on end. In Mexico City, today, it has become a common sight to see water trucks lining up in front of restaurants and cafes, filling in their cisterns; a noisy affair, yet better than closing down the business.

SO WHAT'S NEXT?

In summary, we have a pretty little mess. A city that used to be surrounded by water, today actually struggles to get rid of it after it becomes 'waste', and where rains are so heavy that cars get bogged-down and neighbourhoods get flooded. Yet at the other end of the spectrum, water is so scarce that it needs to be brought from very far (and very low), at a massive social, financial and environmental cost, and is still not enough to meet the basic needs. The same paradigm is probably faced by most growing cities around the world.

The solution should seem simple then. Just put these two together: You have rain and wastewater on one side, a lack of drinking water on the other side, and enough technology to bridge the gap between the two. Make rain potable, treat and purify wastewater enough to make it usable, in some form or another, we know the story, so what's stopping them? I mean, wouldn't it be even cheaper? You probably got the answer, it's a change of paradigm that's needed, the technology is basically

there, and in the long run the investment pays off by itself, quite rapidly in fact. So if it's not money, not a technical issue either, what is this new outlook required?

To explore the question, we need to plunge back into the historical archives. Ever since the 18th century, the vision that came with the industrial revolution and the advent of Capitalism was that of supply and demand. In other words, if that obscure agglomeration called the market badly demands something, and it is technically feasible, be it a service or a product, then someone out there will deliver it or find it for them, given the right price is paid. Applied to resource management, it means: 'you want water, I'll get you water' (did that just sound like a Texan cowboy? If so, my apologies, coincidences do happen). In more elegant terms, it is called 'supply-side management', and as a doctrine it has ruled the world for the past 150 years, at least. So Hydraulic engineers will scan the countryside, analyze the wells, inspect lakes and streams and bring water to wherever is needed, they will do whatever it takes to get it there, even if they have to pump it for miles on end. The same applies to electricity, energy, metals, minerals, and pretty much every resource you can think of for modern society and cities to function. The crux of the matter is planners of this sort will rarely ask the question: 'do we really need this'?

In fact, the question is considered almost taboo, forbidden ground. When, together with a team of colleagues, I presented some ideas on decentralized water planning to the Directive of the public water utility for Mexico City, I was quietly escorted out the door with polite promises such as 'your ideas are very interesting indeed, we like these things, and we'll get back to you'. With a smile the door was closed on our faces, not to open again, at least not yet, or maybe till 'the sh*t really hits the fan', as North Americans are fond of saying.

Proposals that dare consider the reasons behind consumption are not usually considered 'serious' by conventional urban planners. The Market has become some sort of deity, unquestioned in its deeds, and if it needs a certain amount of anything (whether it be water, energy or something else), so be it, we must scurry around and provide it. That's the very essence of the Supply-Side approach. But it's not an intelligent approach in this day and age. At the very least we have to admit that it's simply not working. The other alternative is 'Demand-Side' resource management, and that is where it all comes together, but of course, as you shall see, it requires a certain amount of soul-searching, changing habits included, and most people don't usually like that.

TAKING THE PLUNGE

Let's illustrate this Demand-Side Approach with a little example. Could we tackle the water issue in Mexico from another perspective, 'thinking out of the box', so to speak? OK, so let us begin. How many toilets and urinals does Mexico City have, and how many times a day are they flushed, ever thought about that? With over 25 million inhabitants (including the surrounding metropolitan area), I would dare say, without any accurate figures, that we should have at least 1 million toilets and around 150,000 urinals (for the men's rooms). Assuming these are standard bathroom pieces, that would be 6 litres per flush for the wcs and 4 litres for the urinals. This would be a best case scenario, because in fact a few toilets here are still of the 'old' type, which consume roughly 18 litres, despite a strong Government program a few years back to replace them. But let's be conservative and go ahead with the math. We should consider that some bathrooms are not in use while others receive more than intensive occupancy (such as in busy shopping malls or gas stations), so if we consider an average of 5 'flushes' per day per unit, you would have a baffling 33 million litres of water per day. If we added the average leak rate for Mexico City, which is about 40%, we can then safely estimate that, at the very least, 40 million litres of water *each day* in this city are literally being flushed down the drain!

What then would be an easy solution? Any clever 8-year old would quickly raise up his hand and say 'just change the toilets'. Especially if he knows and has seen more efficient alternatives, such as the dual-flush system, highly popular in Europe, or the waterless urinals, already manufactured and successfully installed by several companies in Mexico. If we wanted to be a bit more radical, then modern, odour-free, dry composting toilets could be installed wherever applicable as well. The implementation of such a program could easily cut the consumption in sanitary systems by half. So *voilà*, 20 million litres of water have just been 'produced', without having to pipe it from anywhere. Add now efficient showerheads and faucets, rainwater harvesting, stricter norms and powerful incentives for treating and reusing wastewater, and all of a sudden, the 'water problem' is gently solved, without a single work of massive hydraulic engineering.

It makes you wonder then, why only a few years ago Government officials were proposing multi-million dollar investments to bring water into the city from surrounding rivers and reservoirs, even farther away

than the existing works. And naturally, since the world has grown ever more dense and complex, peasants of these regions refused to allow the engineering works to proceed, because they were afraid (and rightly so) that it would affect their own badly needed water supply! Blockades and protests carried on for a while, until city planners had to retreat. But they didn't give up, not so soon, for we engineers are after all a stubborn kind. They started looking for more rivers in other directions, exhausting all possibilities, only to discard the projects again after looking at the figures. Even if the initial investments could be advanced (gigantic pumping stations, extensive pipelines sometimes running through rugged terrain), what about maintenance costs? With oil already in dwindling supply (it is estimated that in less than 30 years, Mexico won't have any more petrol to export), we can only imagine the costs of electricity for pumping and purifying massive volumes of water every day. That would assume, of course, that population and demand are remaining stable, which they are not. An expected increase in the number of inhabitants will only make any gigantic hydraulic project seem obsolete in a few years, so even if the large amounts of cash were in fact released, the problem at large would remain unresolved.

A NEW CITY

In summary then, we understand that it would be way more cost-effective to tackle demand rather than just find new sources, which at the moment is not feasible anyway. The answer is to change patterns of consumption, investing in efficient and newer technologies, along with a massive education campaign to cut down on consumption. True, the Mexican Government has already done some of this, but it is only seen as a 'complement', not as a main policy goal. If indeed all the effort, both public and private, were channelled in this direction, the changes would be quite impressive. The same can be said not only for water, but also for energy and other resources. We could envision the cities' roofs producing solar power and feeding it back into the grid, for example, along with biomass from the waste streams being recovered and converted to energy and nutrients.

For one, the paradigm of the 'Octopus City', which greedily spreads its tentacles all over the countryside in search of resources, can be reversed. The potential for investing in cutting back demand and increasing efficiency is virtually unlimited, as new ideas for smarter consumption constantly arise. The surplus money saved

from costly maintenance (and from avoiding large, centralized, hydraulic works) can also be channelled into even more research for developing improved technologies, creating jobs in the process. Why, we can even imagine a bright future where Mexico City, in the midst of a heavy rainy season, first catches all the rainfall it can in individual and collective cisterns, and then actually gives back the surplus to the countryside, allowing the water to flow downstream using the existing pipelines, now in the opposite direction, to where other towns can use it, creating in the process beautiful landscapes and better conditions of life for everyone.

*'Let us not go gently
into the endless winter night...'*

Rush (Canadian Rock Band)

Biolime: The Mock Rock

Rachel Armstrong, Research Fellow, Bartlett School of Architecture

This is a Science Fiction story. In other words, it is a narrative based in scientific research that is currently taking place but which has not yet been made publicly available. The technology is based on experiments that are being conducted at the Bartlett School of Architecture in collaboration with the Center for Fundamental Living Technology at the Southern University of Denmark in Odense.

The essay serves to speculate on the effects of an emerging 'Living Technology', one that possesses some of the properties of living systems but is not actually alive (ISSP, online), when it is introduced as a way of making the buildings of *Mossville* more sustainable, a suburb of the imaginary city of *Hardwich*, by coating their houses with Biolime, a synthetic rock that is capable of producing limestone by fixing carbon dioxide from the air. Although Biolime goes against the conscientious community's notion of what is 'natural' they come to accept that all other methods of generating a more sustainable environment have not sufficient to reverse the carbon trend and new 'unnatural' measures are justified.

FOR THOSE THAT HAD NEVER BEEN to the city of *Hardwich*, it was impossible to tell whether the houses in the *Mossville* region, had actually come 'alive' or not, for whenever sunlight stroked the mineral-clad buildings their facades seemed to quiver with an energized, metabolic glow. Early morning joggers took advantage of the freshening air caused by the solar activation of the limestone, whilst dirt stains faded and

curious cellular plant life toyed at the edges of the slowly creeping rock as if they were deciding whether they had encountered a friend or foe.

The Biolime surface coating on the outside of the *Mossville* houses had been deemed a 'friend' but the new technology had not been accepted without controversy. Indeed, if it wasn't for the irrefutable fact that climate change was happening even faster than all forecasts had

predicted, resulting in increasingly turbulent weather patterns and caused everyone to complain, then the Biolime would have remained a curiosity of chemical behaviour that was of only of interest to an elite group of scientists working in the new field of the Origins of Life sciences. Unusually, these researchers had collaborated with a group of architects who were interested in the carbon fixing qualities of living systems as a way of generating sustainable architectural practices. The collaborators had produced a simple oil-in-water droplet emulsion that used carbon dioxide from the atmosphere to drive a chemical process that formed a rock-like salt called 'carbonate', commonly known as 'limestone'. The resultant work was generally regarded as a fringe research activity though some years later the renewed interest in finding ways of dealing with the runaway carbon count prompted journalistic investigation into the technology and led to a prime time news feature entitled 'Mock Rock'. In the wake of endless speculation in spin off magazine articles such as 'Mock Rock around the Block' and 'Mock Rock da House' this sudden and rather unexpected global coverage of the research prompted the researchers to patent their technology as Biolime. Yet, despite the growing interest in the system and the increased recognition that this technology could actually make a real contribution to the health of urban communities, Biolime continued to be regarded with suspicion. A number of outspoken critics conjectured that, even under the current circumstances, the Biolime technology really belonged only in a laboratory setting and that it had no place in the natural world

Part of the problem was that the technology had been implemented at the national level in the wake of a series of fractious G20 summit meetings. After a series of high profile public protests leading to widespread outbursts of civil unrest and political humiliation regarding the ineffectiveness of every member of the G20 to take action on the issue of climate change, the major economic powers were simply forced by media-led popular opinion that draconian measures needed to be taken on a scale that had not been attempted previously. Programmes that relied on the good will and environmental responsibility of individuals were simply not making sufficient impact on the issue of soaring greenhouse gases that were responsible for climate change and there was unanimous agreement amongst the nation representatives that it was time to generate an orchestrated and creative response to the solution. Of course, they suspected that a patriarchal approach to planetary welfare would be resisted but it was time

that the public faced the facts. The old methods and various forms of public bribery were just not good enough and a completely new approach was necessary. Political attention quickly turned to the 'Mock Rock' technology since it had recently become a popular chat show subject. After a number of rather cursory national polls conducted to investigate public attitudes towards the technology, the First World countries endorsed Biolime as the most immediate and effective way to combat climate change.

The government decided to pilot Biolime based solutions in urban areas to demonstrate the benefits of the new technology in the form of community based public schemes. The *Mossville* area of the city of *Hardwich* seemed a prime location for further government-initiated improvement as it had already responded to national sustainability initiative through exemplary practice. *Mossville* boasted of a permaculture project that had opened up garden spaces for the public cultivation of fruit trees that allowed people to exchange fruit as seasonal currency and had adopted a stance against packaging. Shopkeepers either refused goods with wrappers from suppliers, or removed and recycled at the point of purchase. Mr Grant Soames, who ran a hypermarket chain in several places around *Hardwich*, further capitalized on this practice when he discovered that there was a thriving market in recycled packaging materials. His stores not only became a focal point for community de-packaging activities, but also served as meeting points for the youth who used the worthy excuse of recycling duties to escape their homework responsibilities.

Less than a month before the project was to commence the local councillors received official notification of the Biolime initiative by traditional post, which was a little unusual but the *Mossville* councillors prided themselves as being progressive individuals and staunch government supporters with careers to protect. So, they organized a public meeting to salvage some semblance that a democratic process was taking place and head-off any misconceptions about the centrally driven imperatives. The response to the public notices was overwhelming and a swell of banners that read 'Block Mock Rock' or 'Rock Mocking Us', soared above the *Mossville* crowd that had turned out for the meeting.

Councillor Arthur James, the youngest and most ambitious of the local politicians brushed down the front of his suit in preparation for conflict with those that had elected him and asked the staff to open the

doors. He'd agreed to lead the public meeting partly because the senior committee members admitted they didn't know what a 'metabolism' was and partly because he actually believed in the value of the project. Although Arthur had initially been as sceptical as anyone about the hype surrounding the Biolime technology, he had become increasingly charmed by its simplicity and effectiveness. Councillor James reminded the assembly of stony-faced people that limestone occurred naturally in underground caves and as a result of every day processes like around a kettle element and urged the congregation to consider buildings differently.. What it might mean to the community if the Biolime technology enabled their homes to do something more important than provide warmth and shelter? How would they feel if their homes were able to contribute to the health and healing of the planet? After a few moment of stunned contemplation, some audience members raised objection to the technology by drawing analogy with the 'disastrous' effects of genetic modification but Councillor James was also quick to point out that the cell-like agents used in the Biolime process did not have any genes. Biolime itself was not alive and although it shared some of the characteristics of living systems Biolime would die without the continued nurturing of the community. Mrs Angel Darling who was already considering spending more time outside for health reasons, wondered what the councillor meant by this and was told that the Biolime needed to be continually replenished to keep the carbon fixing process going as it did not last forever. The fragility of Biolime and its dependence on the active participation of the community was sobering news and appeared to endear the technology to the congregation, which seemed less anxious and began to ask questions about the necessary cultivation methods.

On account of his youth, Councillor James found harder to deal with the more philosophical issues that were raised in objection to the new technology. Hearing Arthur's voice strain at Mr Henry Norton's recurrent interjections that Biolime was 'an act against God', Councillor Andrew Talbot felt the need to step in and assist his colleague.

Mr Norton was not easy to console as he'd just lost his wife and was angry with everyone about everything. Councillor Talbot though managed to affirm and dismiss Mr Norton using a rather meaningless but effective platitude before moving the conversation swiftly onwards. In fact, Councillor Talbot had most difficulty with the permaculturists who were the most vigorous

objectors to the 'unnatural' nature of Biolime and could not accept that artificial processes could coexist with natural ones. The permaculturists blamed all forms of technology as being responsible for the sorry condition of the planet and Councillor Talbot responded to these objections with a theatrical and ponderous demeanour. He cast the congregation's attention back to the days of planting orchards and using grafting technology to 'enhance' plants as being inherently unnatural pursuits that had ultimately benefited humankind. Councillor Talbot conjectured that those groups who worried about the implications for 'natural' systems were resisting the need for change, rather than making a sound case against the technology itself and raised the stakes of the meeting by grandiosely urging *Mossville* to take a lead in making amends to the planet on behalf of the human race by embracing Biolime.

An overwhelmed and exhausted audience found themselves applauding the veteran councillor and were invited to cast their votes on the Biolime project. Despite the handful of vigorous objections that had been voiced during the meeting, 'Mock Rock' was accepted with an overwhelming majority. Even Mr Norton was overheard muttering to himself on his way out of the town hall that if 'the abomination' meant that he didn't have to spend every Sunday morning sorting rubbish, then he was all for it. Life was too short to sort rubbish.

A public holiday was held in *Mossville* the day that the Biolime was delivered and became a community event. Large containers of locally prepared Biolime solution were assembled on a cordoned off section of the road where people helped each other in filling up portable spray containers and coating the outside of their homes fully clad in overalls, goggles and masks.

Mrs Kathleen Gately who looked oddly alien in goggles that were too large for her sunken features, had problems using the hand-pump with her rheumatoid hands. James Chesney, who had just come from next door to complain about the persistent yapping of her toy dog that was upset by Mrs Gately's appearance in protective clothing, decided to help out whilst Kathleen repeatedly asked him the same question. Why were they were spraying a liquid on to the buildings in *Mossville* when they'd been promised some rocks? Jimmy mumbled from behind his mask that the rock was grown from the solution and nipped over the fence to finish off his own place. Kathleen took off her overalls, which settled the little dog and sat on her front wall looking back at her house in disbelief. How it could be true that water could turn into rock? She shook her

head. In her view, this was something that would 'beggar Jesus' to figure out, so help her God.

Since everyone was fully occupied with diligently applying Biolime to their homes the usual neighbourly vigilance had slackened as people were concentrating on the job in hand rather than wondering what their neighbours were up to. The community was later astonished to find that an unpopular modern statute had been drenched in so much Biolime solution that it now resembled a spacecraft. Nor were they able to explain how the local skate boarders had managed to acquire a Biolime 'ramp' that gave them enough air to be clearly visible from Mr Norton's back yard.

Otherwise the day came and went uneventfully and after the initial flurry of activity and excitement, *Mossville* settled down again to its frugal routines.

A few weeks later those areas that had been sprayed with the Biolime solution began to transform and produce a moist, heavily patterned, whitish rock. Small crustings of this material appeared in gutterways and grew into stalactite fingers where water had accumulated. Small children picked at oddly shaped protrusions that were sometimes used by wildlife and the Biolime could also be found in places where it had not been deliberately applied. Playground drains became unnaturally frosted and Biolime trails squeezed like toothpaste through gaps in the pavements. Where the Biolime had died it became laced with white ribbons that were prone to fracturing. On a dry day, these brittle splinters of rock could be heard cracking and falling like old plaster from the walls. Rain tasted clearer, fires burned brighter and even algal blooms in the waterways were more vigorous than before *Mossville* embraced Biolime and whilst many subtle differences were noted in the environment, the people continued with their usual, well-meaning and peculiar ways.

Gradually, Biolime became part of the everyday community tensions. Jimmy grew tired of Mrs Gately's moaning that he hadn't done the front of her house properly and refused to stop by any more. As a result Kathleen's façade looked scarred and provoked snide comment when she queued at Mr Soame's checkout. Kathleen expressed her defiance against her neighbours by allowing her little dog to urinate on the corner of Mr Norton's house. This act of wilful vandalism was quite a spectacle as the acidic urine caused the Biolime to fizz like freshly shaken lemonade. A vigilant Mrs Darling who had finally found her excuse to spend more time outside by taking up smoking, witnessed the sabotage and swore at Kathleen through her nicotine stained lips.

It was people like her that were responsible for global warming in the first place! Without so much as casting a backwards glance Kathleen flipped two rheumatoid fingers at her critic and patted the little dog on the head. Affronted but in need greater need of a cigarette fix than altercation, Mrs Darling resumed her smoking and cursed through her breath right to the end of the butt.

In his government report about the Biolime pilot scheme Councillor James commended the community for intensifying their permaculture and recycling efforts and commented that the only real difference to *Mossville* was the remarkable snow-like coating of the buildings. Councillor Talbot on the other hand was more perceptive, remarking that the presence of Biolime made the community feel that their individual efforts in combating Global Warming were significant. In his opinion *Mossville* had realised that if something as small as the chemical fragments of technology that constituted Biolime, could make such a difference to the health of the community, then the efforts of each individual, no matter how trivial, would make an ever greater difference in their collective quest to tackle the weighty issue of climate change.

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[Accessed 12 April 2009]



Copyright Peter Marshall, 2007

Peckham Regeneration Debate

Thomas Morgan Evans, Department of History of Art

IN SUMMER 2007 there was a 'Peckham Regeneration Debate' outside the Sassoon Gallery, an art gallery occupying a railway arch just behind Rye Lane. The occasion was Peckham Rising an art show consisting of photographs by Thabo Jaiyesimi and Daniele Tamagni and a sound piece by Janine Lai. Community members were there to discuss the areas problems and its future, be it bright or shady. Hannah Barry was there, I don't think she spoke, but she is now definitely, perhaps definitely, part of that future.

Be it bright or shady.

The top two floors of the multi storey car park on the other side of Rye Lane, with their amazing views, are now host to a temporary art show, *Bold Tendencies III*, organized by Hannah Barry Gallery, consisting of four groups of artists from the local area.

The Peckham multistory car park is a monument. By the time it was built the area was already in serious decline, there were no cars to put in it, no visitors. One could say that it stands now as a monument to greedy and neglectful town planning, I heard that the National Car Parks Company was a major donator of funds to the Conservative Party. 'Who cares if it gets used?' say the company directors, 'we do the job, get paid and get out'.

Cars, the great all consuming status symbol, private glass worlds, panoptic bubbles, machines for seeing, and being seen. Art machines.

There is an implicit irony imbedded, then, in the occasion of the installation of art on the top two floors of Peckham multi-storey. The art-scene that is bringing 'rejuvenation' and 'gentrification' to Peckham brings

with it the kind of people who would have occasion to use multistory car parks, so that what could only be used because of its disuse, sows the seed for the impossibility of such misuse in the future. With 'gentrification' comes 'gentry', as we are meant to infer. Outsiders, if we think a little harder. People who might use the multistory car park might be people who aren't at ease negotiating the streets and on street parking, who get flustered when people toot their horns and don't politely wait. People with pound coins and fifty p's --proper money-- tucked away in the trays in the door fittings by their seats ready to pay for tickets; lazy people, fat people, rich people, people who can't parallel park, whose cars are too big.

Disuse, misuse, abuse.

According to the 2001 census, which is considerably out of date now, over 55% of the population of Peckham are some kind of black; 'Caribbean Black', 'African Black', 'Other Black'. I met one black man speak at the show's opening. There were more black people but not many. He was from Hackney.

In other news, the artists in the show generally missed a trick in my opinion by not referencing the site's specificity as a car park. I expected some kind of reference: to cars maybe, or to the Brutalist architecture movement that gave the space its form, as well as fashioning more famously the Trinity Square car park/diner in Gateshead. Famous because in Get Carter Michael Caine throws someone off the side.

The majority of artists, like their associated curator and, in turn, the developers who put the car park there in the first place have all seemed to have forgotten where they were.



Of All Places

'Isabel Fishbourne'

(Franco Pesce, MA Hispanic Studies
& Ana Fletcher, MA Comparative Literature)

OF ALL THE CITIES SHE'D VISITED, she said, her favourite was London and I, of course, immediately asked why. You can imagine, I guess, how surprised I was by her claim. Why London, I said rather harshly. London, she said, is just great. But I'm used to these rapt, vacuous exclamations. So I waited.

The day I arrived, she said, we went to meet Jaime at the university and he showed me around. They have so much money there that every Thursday they offer the students an open bar. We had drinks with this girl who was in his class and a guy who was doing the finance Masters. They were so proud of the internships they were doing at these big banks. I guess that's why you guys come here, I told them. I could see it was quite an achievement. They complained about the high rents they pay and the small spaces they get in return. But you're in London, so what does it matter, I thought, but didn't say. I had a glass of wine and, guess what, she said, it was Chilean.

She started, I felt, to enjoy being listened to. If you listen, people will talk to you, no matter what. They had gone out for dinner that night. Jaime had this craze for Carluccio's, so I said sure, why not, I was starving by that point anyway. When we got there we bumped into Camila and Antonio. Jaime asked how come they were out on a Thursday night, and Camila explained that a girl from Viña had moved into their Hall and had offered to babysit. And there they were, she said. They were almost done though, so we sat at our own table. When we left it was only midnight. But midnight, they explained, is rather late: not that it feels late, but the city switches off. They hate that, she said. So I got to bed early that night, although to be honest, I was exhausted.

I said maybe we should take a break, but she ploughed on, oblivious, gushing about the amazing weekend that she just knew was in store for her. I woke up rather late, she said, but Javiera hadn't been up for long. She'd already made, she told me, plans for lunch for us. We walked to Francisca's place – remember her? We used to be close when we were younger, but we've lost touch over the past few years. So it was lovely to see her again, though I didn't, she said, know that she's married now. Anyway, we waited for ages because this friend that Francisca had invited along was taking forever. I couldn't hold it against her, though: Ignacia was so funny that Javiera actually forgot to get us off the tube when it was time to change lines and we ended up taking a great big detour. Her English accent was hilarious – she could even do different types. When we got to the restaurant she pretended to be Irish – with her red hair she looks the part, apparently – but the waitress was onto her right away. For a second she looked like she might take it the wrong way, then she saw the funny side. There was, she said, only one long table that we had to share. Most of the people were South American, I could tell, she said, by their looks. I had a *pisco sour* and *empanadas*. Javiera was disappointed though, she told me she'd planned the whole thing around the *pastel de choclo*, but they weren't serving it that day.

That night there was this party – a friend's birthday – that Ignacia thought would be fun. Are you going, she asked, but Francisca wasn't sure, and Javiera already had tickets to see *Chicago*. She'd told me about it in time to get me one, back when I'd first confirmed my trip, but I'd just seen it in New York. Ignacia said you should come. So I said yes, I'd love to go. I liked Ignacia and, why not, I thought, I haven't got anything else on.

We killed some time that afternoon at Ignacia's flat. She played me some music and we figured out all the friends we had in common back home. Before we knew it it was dark. And then it was time to get ready for this party. Of course there wasn't much getting ready I could do, and I worried that I wasn't exactly dressed up. Ignacia said that she had a pair of earrings that she thought would suit me. They were gorgeous, if a little flashier than my usual style, but I think they did suit me, kind of. Francisca had left earlier. I knew she wouldn't go.

I was wrong, she said, to assume that *pisco* would be hard to find in London. People who visit from home inevitably bring a bottle or two and you end up stockpiling, as Jaime put it. It's not so tricky. But I didn't know that at the party, and I didn't drink as much as I could have. This was news. I thought you hated *piscicola*, I said.

She said, well, every now and again I enjoy the odd *piscolita* or two. That night I only had one. It didn't matter, of course, the party was good. Actually, it was great.

It was nonsense. All this talk about *pisco* was far too digressive, even for Catalina. So I stopped her and said tell me, who was it you met at this party that you're not mentioning? Are you saying I slept with someone? It's not as if I wouldn't tell you, it's just a little embarrassing. This guy, she said, was two years ahead of me at school when we lived in Valdivia. When I said hello, though, he didn't recognize me. I always thought that he knew. We never really talked that much, but he could tell I was in love with him, he must have done, and then he didn't even remember my face. We talked for a while and then we danced and suddenly he was all over me. I stayed until Jaime and Javiera arrived. I wasn't going to sleep with a guy who couldn't even remember who I was. I asked him if I would see him the next day. He said he didn't think he'd be able to make it. The thing is, she explained, some people from the Hall had organised a barbecue and she thought that he'd probably be there. Everyone was going. I'd assumed he would go too, that's the only reason I mentioned it to him, she said.

She thought, wrongly as it turned out, that they were running late. This was the next morning. Camila and Antonio were amongst the early ones and they'd brought Dominga with them. Here, he said, we've been told that she's supposed to wear one layer less than we are. They were annoyed. They said that in Santiago they'd been taught exactly the opposite. Can you imagine, Camila asked, if she was only wearing a babygro and a cardigan. She'd be freezing. I took care of the baby so that they could relax. I don't really like babies, so when someone else appeared on the scene I handed her over. It really wasn't particularly cold.

At three or four people finally began to arrive. We were at this park they have across the street. It belongs to the Hall and you need a key to get in. But apparently our hosts were fed up, she said, of having to trek to and from the gate every time someone new arrived. Every barbecue it was the same problem so I thought it would

be nice to be the gatekeeper for a while. But it wasn't all that fun, because no one expected me to be there, in charge of the gate. I got tired of explaining that I was visiting, that I was leaving the next day, that I had been travelling for a while. I didn't really want to stay there any longer.

Because you were disappointed that this guy you slept with didn't turn up?

What's wrong with you? I already told you, I didn't sleep with him.

Why were you so sure he'd turn up?

Why are you so keen to have me shag my way through London?

It was obvious that she was skirting around things again, but there was no point in riling her up, so I didn't answer.

As it happens, she said – a little over-breezily, if you ask me – the gate thing ended up being a good move. The guys got the barbecue going in the meanwhile – Jaime ended up in charge of it, not that he minded – and I got back just in time for a *choripán*. From then on in it was excellent. Two guys I hadn't heard of before had woken up at six to get to the market early for the best beef. The salads were beautiful. And everyone loved my *pebre*.

I said that it sounded like she'd had a great time. Well, I did, she said. Someone put on some *cuecas*. Nobody dared to dance, of course, until Javiera said I was an expert and wouldn't anyone be so kind. Francisca's husband said that he would. He was no natural dancer – he was actually kind of wooden – but he got the job done. Anyway, the *cuecas* got the party going. I was complimented on my dancing. There are, she said, some nice pictures.

I didn't care about the pictures. She had suddenly stopped talking. What happened next? She shrugged. Well. Then it went on, like any other barbecue. Some people got drunk, no one made a massive fool of themselves, and that's it. The flight home, she said, was really awful.

And that's it? You spend a whole month travelling around Europe and this get-together was the highlight of your whole trip?

She said what do you mean this 'get-together'. She drew, in a new gesture, the speech marks with her fingers. Aren't you the one who's always banging on about how it all comes down, *ultimately*, to social interactions? It just happened to be an amazing barbecue, what's wrong with that? It wasn't, you might like to know, perfect. It went on too late, maybe. And people just kept coming and I'm not really sure if they had all been invited. It was supposed to be a kind of *dieciocho chico*, a warming up for the *dieciocho*, but by the end there were people from all over the place, a whole bunch of international students and some English ones, and it was a bit strained.

She caught my eye then but I let it drop.

It had started to rain. She was tired and a bit ner-

vous because of the flight she had the next day. She saw someone standing away from the group, staring into the bushes by the fence on the other side of the park. She got nearer and realised it was Ignacia. You're going to get wet, she said she told her. It's just a drizzle, it won't last long, she replied. I asked her, she said, if she was annoyed by all that noise around the fire. Yes, I guess so, she said, I think I've just seen a fox. It must be the one that lives here in the park.

So you see a fox and now suddenly London is your favourite city?

I didn't see it, she said. But I did see a rainbow.

There was a full moon, she said, and the rain was light, you could hardly feel it. I thought about mentioning it to the others. But they would mock her before daring to look up, so she didn't. And it didn't last much longer, she said, anyway.

I've thought about it, I've looked it into it, it is possible. But I think she's making it up. To embellish her stay in London.

Sustainable Cities



First
prize

Olivia Hamlyn, Environmental Law

THE CITIES

EVERYONE SHOULD VISIT ATHANASIA. The healthy city. The Immortal city. As you approach, you catch glimpses of it through the thick, surrounding forest. At first, you are not quite sure whether it is a city at all, so perfectly does it blend into the trees, living with them as part of the forest. Athanasia is a city with a light footprint and faint presence. The delicacy of its structures suggests that it is always almost on the point of dissolving. If it did dissolve one day, the forest would grow up again through the city, unhindered by relics of the last dwellers, and the wildlife would re-colonise. If you were to return a few years later, you would find no evidence of previous human existence, only an area where the trees are younger.

Athanasia's strength and endurance lie in its character. It balances itself and its needs against the shape and the needs of the countryside it inhabits. It allows itself to be moulded by the natural structures of the seasons and surroundings.

Athanasia has an unhealthy, sister city. If, turning away from Athanasia, you walk for five or six days through the forest until it fades into deforested stubble-planes and from there into vast agricultural fields, you will see a hard, geometric shape forcing its way through the horizon. Walk closer and the natural surface of the earth runs out, being replaced with cracked concrete and roads twisting through the landscape from every direction, piercing the boundaries of the city. If you are lucky enough to find a footpath into the city, take it, but beware of the potholes and plants struggling out towards the sky. Very few citizens of the unhealthy city walk, and certainly do not walk out of the city, for they see no need to view or understand their surroundings. So the footpaths are not maintained, but left as disintegrating evidence of a sense that became extinct.

From afar, the unhealthy city looks indestructible and in a sense it is. Its buildings were built to be strong; made from concrete, reinforced with iron and steel, intended to withstand and fend off every onslaught of all parts of the world that are 'other' than the city. The unhealthy city would not dissolve like its sister, but it will crumble, slowly and reluctantly. The brickwork will break and crash to the ground, leaving the metal reinforcements bent and skeletal but standing defiant. The dust from the crumbling will hang over the ruins for centuries, or else be blown across the fields where it will settle, suffocating what life remains. The mark left by the unhealthy city will be permanent and although nature will eventually creep back, it will not be capable of eradicating the city's historic footprint.

IN THE CITIES

The best way to reach Athanasia is to follow a stream. When you walk alongside the stream, you notice three things. Firstly, that the stream is deep, secondly that you can see right to the bottom and thirdly that it is full of life. As the stream leads you into Athanasia, you realise that the trees are gradually thinning and making way for buildings; both houses and then buildings of state and for work. The streets are still leafy and the air quality as clear and as sweet as it had been in the middle of the forest.

Athanasia wasn't planned or designed. Rather it grew into its surroundings, with the streets filtering through the wood, curving where necessary to take account of contours and using only as much room as the land could accommodate. The neighbourhoods are not just communities of people, but of all things that live, and all live together in recognition of their mutual dependence. Each neighbourhood has its own character and knows no mirror-image neighbourhoods elsewhere in the city. The shops are unique, local and independent. Advertising is done primarily by word of mouth and large billboards displaying the temptations of a different reality are absent.

In the centre you find reflections of the city's surrounding countryside, with its large, wooded park. The stream you follow in leads all the way into a natural lake in the centre of the park. Do not misunderstand me, the city is not an untouched wilderness, nor is it sterile through excessive cleanliness. The centre is busy, like any city, bustling with shoppers, tourists, professionals, artists, street performers and school children on daytrips. The paths the citizens take in their daily movements weave in and out of one another, invisibly binding the city together. It is well lived in, as any city should be, and therefore familiar with dirt. But the dirt is simply the result of activities no more harmless than living and ordinary use. The living happens within the capacity of the city to absorb the residue and of the rain to wash it away to where it harmlessly disintegrates.

The first thing you notice when approaching the unhealthy city is the noise. The roar of the 6-lane highways that lead into the city, or the chorus of car horns stuck in jams on the roads. The noise intensifies as it bounces off the hard surfaces of streets and walls. The air becomes heavier and thicker the closer you get. It hovers, trapped between the buildings. This is a city built on burning: it burns to travel, to work, to construct, to entertain and

to feed itself. Its buildings are black from smoke and this informs the dark humour of its inhabitants. It is the grime that holds the city up; if it were cleaned, it might collapse, they joke.

Uniformity is what characterises the public spaces of the unhealthy city. The streets are laid in a perfect grid pattern, with the same shop on every corner and the same pattern of facades along every pavement. There is little to choose between the different districts, which are all the same district. The business owners even learnt how to clone cafes decades ago as a generous gift of predictability and no surprises for their consumers. The consumers in turn, stupefied by Same, trace their usual routes in fragmented oblivion.

LIVING

If you were to meet an Athanasian and ask him what does the city do with its waste, he would look at you blankly. Waste as a concept died out generations ago and only the word remains, ancient and meaningless. The Athasians see the arrangement and rearrangement of molecules into different objects for use at home or at work as a cycle without beginning or end. When the time comes for the molecules to pass out of human use, the Athasians ensure that they can be reabsorbed into nature with the minimum threat to its resilience.

The Athasians consume only what they need and their need is based on what the natural systems on which they rely can provide and continue to provide. Thus, life in the city thrives on a principle of reasonable austerity. Not because the resources to provide the citizens with more do not exist, nor because they cannot afford to acquire more but because excess is accepted as unnecessary. All possessions and equipment are treated as worth keeping and restoring forever, or until they are given a different function.

There is no need, in the unhealthy city, to enquire what it does with its waste, as it is obvious. On your journey into the city, you see mountains of rubbish, growing out of huge pits. The mountains are composed of every kind of discarded good: industrial, commercial, household, clothing, some of it barely used but all of it cheap and obsolete. At the heart of the culture is a paradox that places great value on material possessions but denies the attachment of value to any particular object such that the owner wishes to keep and maintain it. Rather, an obsession with the linear ritualism of acquiring modern and discarding outmoded prevails.

For this reason, the unhealthy city exists heavily upon the Earth. It devours all stores of nature ignorant of capacity or limits, blind to the need for maintenance and restoration. Exhaustion in two or three generations' time is no reason to quench its voracious appetite and so it eats more and more into its resources, deceived by the appearance of abundance.

ENERGY

I explained to you before that Athanasia's endurance lies in the lightness of its existence, but it also originates in a restrained use of energy. Like someone taking a stroll, it never exhausts its reserves but conserves them by leaving space for restoration and replenishment. It can thus continue strolling indefinitely.

The unhealthy city, by comparison, sprints. It draws constantly upon its reserves, attempting to distribute energy to each part of its heavy load while creaking under the combined weight. It knows such speed cannot be maintained but its current insatiable hunger makes it too difficult to stop. It will only stop when forced to, starved of fuel, sinking breathless and shattered to its knees.

ORIGIN

You may wonder how a city such as Athanasia came to be. Perhaps you are imagining that centuries ago a wise lawgiver laid down how the Athanasians should live. Or, if you are practical, you may think that the citizens' behaviour is shaped and constrained by strict regulations. Actually, neither is true and in fact no one knows the origin for sure. Some say that the city was founded by refugees from the unhealthy city who brought with them the ideal of living the opposite life. Others believe that the city has always existed and that the invisible principles and network of laws governing its structures and way of life were gradually shaped by the environment which it inhabits.

The question does not cause the Athanasians much trouble beyond intellectual debate and interest. The truth is that, to a greater or lesser degree, they hold the same principles and live with a proper respect for the life systems of which they are a part.

My theory of the origin is that at some point in its history, the city underwent something you could call a natural revolution. This took the form, primarily, of a change of consciousness. The citizens realised that as humans, they need not place themselves outside or

above nature but instead that they belonged within the natural systems and were as dependent on them as any other life form. They also saw that it was not their right to impose laws on the world, but rather that laws grew on trees. They understood that these laws should be observed, since it made no sense to argue the importance of something else with the unreasoning, unconscious force of nature.

Within the collective consciousness of Athanasia, the idea of stewardship developed. Current generations have a duty look after their natural heritage to pass on to succeeding generations. This idea is held so strongly in the minds and consciences of all Athanasians that sometimes you swear that the streets glimmer with those who will inherit next. The city formalised this by appointing to public office a citizen whose responsibility it is to ensure that the rights of future generations are respected.

All action to achieve this is based on certain principles derived from reading nature and understanding its laws. There are people whose full-time job it is to discover and interpret these laws. It is an intense scientific process. The discoveries are reported back to the political representatives and lawyers who translate them into language understandable by humans. Many of the laws are highly technical but there are some broad principles that you and I can comprehend.

The first is a duty not to exploit nature's resources beyond their own capacity to regenerate. Fish stocks, for example, are monitored and if the population is low, there is no fishing until it has recovered. It recognises the fact that there are limits to the burden humans can place on nature to meet their requirements, and if humans want to continue eating fish, they must respect those limits. Secondly, there is a duty to share fairly nature's assets both between humans and other members of the natural system, so that no part is deprived of what it depends on to exist. This is the recognition that human needs do not outweigh the needs of other parts of the natural system. The intrinsic value of non-human life is understood and respected by all the human dwellers of the city. Thirdly, it is understood that sometimes, human input is needed to maintain and manage natural resources. There is no ban on human intervention or use of resources as it is recognised that humans carry an instinct to develop, progress and improve. However, this is done sensitively and bearing in mind the other principles.

Should any of these principles be breached or the laws broken, it is not just humans who can bring a claim.

The part, or parts, of nature that have been damaged may be represented in court. If the defendant is found guilty, he is not punished with a fine, or imprisonment, for these represent no compensation to the damaged party or those who depend on it. Instead, remedies are based on the principle of restorative justice which provides that the damage is repaired and places on the wrongdoer a duty to tend to that part of nature until recovery is complete.

When you have seen both cities, you understand the difference these principles make. A citizen of the unhealthy city would be as puzzled by them as an Athanasian is by the concept of waste. The unhealthy city is concerned only with the current needs of humans and these override all other considerations.

Everyone should visit Athanasia. The eternal city. The city that does not exist.

The View from Number 36

Elizabeth Harvey, Department of History

I'VE LIVED HERE FOR MORE THAN 60 YEARS. We moved here just after the war. Place was different back then. The loo was outside, there was no telly to gather round...no, just the old wireless, that's right. We left our doors open at night, the whole street would get together to compare ration books on a special occasion, sharing out the sugar and meat that we had between us. Place was different back then.

No people from other places either. I remember when they first came here, to our road. Real polite they were, gentlemen always tipped their hat to a young lady in the street, the lads would ask you to dance down at the youth club, but in a respectful way, no monkey business like you get with lads these days. Place was different back then. They're all different now too. The old ones worked hard, taught their children how to get along in life, how to get along with people, how to be our neighbours; just what we used to teach our kids too. Not now though, no. Now I can't pronounce my neighbours names, I hear strange wailing coming through the walls at least five times a day and they dress as though they don't want you to see their faces. Place is different now.

Had some trouble too, have our neighbours. One day a few years ago when I was making tea with the back door open – must have been summer, start of July I think it was – I heard them shout. Now I'm not saying the wailing isn't a bit noisy sometimes, but they've never been ones to shout. It wasn't just the one shout either, no, it went and on, and then the man said something in a language I couldn't understand, then the son, a big lad for his age (he was only eighteen but could take on all the lads down at the local boxing ring) started to eff and blind and make a right din. Well I didn't know what was going on, racket that they were making, so I went outside to the front, and there they were, standing by the fence out front, looking at the door, still making a terrible fuss. Well when they saw me the Dad looked sad, really sad, and pointed towards the house. I thought 'I know what this is, it's them blimmin' boys from Number 23 playing football in the street again, or throwing stones, and now they've gone and broken someone's window'. When I came out the house to see what he was pointing at the window was still there, but some little scamps had painted it, or maybe sprayed it like they do, and in big, red letters they'd written DEATH TO TERROR. Well, I thought, death to terror, that's a strange message to leave your neighbours, and it'll be a few bob to clean that window up again. The man looked at me, still sad like, but something else too. Then, just as I was about to tell him that the young boy from Number 52, Gladys' grandson, had cleaned my windows up a treat the summer before last, he suddenly looked towards the door and started shouting again. This time when I looked I saw the little 'un there – lovely she is, always smiling on her way to

school – and he ran into the house and shut the door. The lad was still there, staring at the writing, and maybe he understood it more than me because he was phoning someone and speaking to them serious like, not like how you speak to the window cleaner or anything, and he looked angry, not sad like his Dad, but angry.

Anyway after that the police came round. I only know 'cause they knocked on my door too. Asked to come in they did. I gave them a cuppa and asked what I could do, and they said they'd come about the writing on the house next door. I told them you only had to look over by the train track to see how much paint gets everywhere these days, but then they started asking me about my neighbours. When they were in, when they went out, who came over to the house, had I seen anything suspicious. Well, I said, I'm not one of those women to stand by the window every day nosing in on my neighbours, but I do like to keep an eye on things, on the road and that. Place is different nowadays after all. I told them about the Mum taking the little one to school, and the older one playing football with his friends, and about the wailing, and that they always went out all together on Saturdays. Nice, like, all the family, like we used to do when I was young, although the only place my Dad would go with us was the Church and that was on Sundays, mind. I told the young officer that the road had changed, the neighbours were different to the old ones, not as chatty, not ones to want a cup of tea and a biscuit, not ones that would bring you fruit cake that they liked to call black cake. No, they're different to the old ones. The policemen were nice – said thank you for the tea and left.

Manners; now that's always something that I've liked, a young 'un who can respect other people. Them lads from Number 23 know my name sure enough but they're more interested in kicking the football hard or chasing each other down the street than saying excuse me. The ones next door they know how to be polite though, even the little one says please and thank you, now that's more like it used to be. But the place is different now.

Someone came to the door just the other week, said he was campaigning, used a funny word that reminded me of the fabric tents are made from, and asked who I was voting for and could he come in for a chat. Well, I asked to see his badge (never can be too careful these days) and it had some letters on it, big like, in capitals – I can't remember what they were – but it seemed ok so I asked if he wanted a cup of tea while we chatted. He said yes (milk and two sugars) and sat down on

the sofa. Now when I was growing up it wasn't really a woman's place to talk about politics, and I know things have changed a lot nowadays but I do think things were simpler back then, what with the war and things, people were just doing what they could to get by, to help their country. When I started saying that, though, the man got very excited, told me that was exactly what he'd come about, getting people to like Britain again, and to be British again. I didn't have the heart to tell him that I didn't really understand what he meant; 'to be British again', I didn't know we'd stopped being British. When he came round to that bit, though, he said that we weren't British anymore, not with all the other people in this country, not when all our jobs are gone and we can't get work and we have to work to support people that aren't British. Well, I said, as far as I was concerned it didn't matter about jobs and the like, the neighbours work every day and do the best they can for their family, just like people did before, and they're the ones with the wailing and the names I can't pronounce. But our Linda's son, though, that one at Number 23, he hasn't done anything but sit on the sofa and shout at his kids since the day he stopped going to school, so I wasn't really sure it mattered about the jobs so much; if people worked they'd be ok, if they didn't then their lads would run about round the street with no manners. I don't think the man liked it when I said that. He started asking me if the old times, during the war, had been better, if I liked the community better, if I liked being able to share things with my neighbours. While I was still thinking about that he left, didn't even say thank you for the tea, just said he thought things were better before.

I looked out of the window for a long time that afternoon, I saw them lot from Number 23 running around, nearly knocking some poor dear off her feet, throwing stones at next door's cat. And I thought. Thought about what the man had asked me. Back then no one would have painted anything on the front of someone's house, we all knew everyone and there was a lot more respect for people, for the adults, your mum and dad's friends. Now don't get me wrong some people still know how to be neighbours, still share things like, but the place is different now. But different doesn't always mean bad, or even worse. We had to share things before because we didn't have enough – enough food, enough clothes, sometimes even enough water for a bath. We did go to school, but not all of us did anything with any of the learning, us girls were in the house and cooking and chatting with the neighbours like. Now it's us who can go out to work too, and when we do get round to meet-

ing our neighbours, to talking to them, we learn a lot more now too. Take them ones next door to me, the ones that wail. Well a few days after the writing went up on the wall I saw it still hadn't been cleaned off, and I remembered that I hadn't told them about the lad that did my windows a few summers before. When I went round the lady opened the door with a big smile, but when I mentioned the writing she looked sad, just like her husband had, and shy or embarrassed about it too. I gave her the name of the lad and the number, and she looked so happy, nearly had tears in her eyes, and invited me in for tea. Well I'm never one to turn down a nice chat, and it was a chance to see what they'd done with the house since the old ones had left. When we walked into the kitchen I saw she was cooking and it smelled all of spice and herbs.

After we talked about the neighbourhood and the school her children go to – the same one we sent ours to years and years ago, just round the corner – she asked if I'd like to try some of the food, that if I liked it she'd give me the recipe. Now that's learning something new. She also said that she'd tell her son to come round and help me with the telly since it was on the blink.

Now I think back to how things were before, how life on our road seems so different, but then I really look at people and I think they aren't really that different at all. Place is different, but people are just people, and sometimes they're nice, sometimes they're friendly, sometimes they wail, sometimes they let their kids run wild and kick footballs into the road; but, on our street, people are just human after all.

Recycling 'Out of Operation' Industrial Material into Architectural Construction

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In this article I would like to investigate if and how an architectural design construction can be developed by recycling 'out of operation' industrial seismic material. I would explore issues of industrialisation, constant change of our cities and need for being capable to recycle old industrial objects into something new. This article also concerns the questions of creating raw building material out of waste left in our world. Specifically, the article concentrates on the questions of how seismic objects could generate new design possibilities for an architectural construction, how this architecture will appear and what shape will it take.

In particular, my article as well as my own designs refers to the work of Jean Tinguely. The interpretations of the processes of his artwork have embodied into my work. My first experience about one of the most representative makers of contemporary art – Tinguely – was in 1990, when some of his works were exhibited at the Tretjakov Gallery in Moscow. I was fascinated by his exclusive style of working and how he produced works of art by collaging and reusing industrial materials.

Thus, Tinguely's works have been selected as the main case study for my article and design work, along with the research of the social, ethical and ecological practices of recycling industrial objects nowadays. Tinguely's working techniques have been analyzed interpretively to determine how his artistic methodology might help define my own architectural working method.

NOWADAYS THE INDUSTRIAL WORLD is experiencing the most revolutionary change since Henry Ford's invention of an improved assembly line and installation of the first conveyor belt-based assembly line in his car factory.

One of contemporary examples of an automobile manufacture is The Volkswagen Automobile Company based in Wolfsburg, Germany. It is one of the largest brands by sales volume nowadays. The factory grounds cover 8 square kilometres. Volkswagen brand production uses the same equipment, methodologies, work environments, layouts through all their factories based all over the world. Wherever the car is built there is virtually no difference in the process used.

The example of the Volkswagen Automobile Company shows how automotive, integral and necessary industrialisation processes are connected to our lives. Consideration of this information gradually built my understanding of the fact that in the time of industrialisation and therefore constant change in our cities, we should be capable of recycling old industrial materials into something new.

Nowadays practices of recycling industrial objects, represented below, can be divided into social, ethical, and ecological aspects.

First of all, taking into consideration the social direction of recycling it is necessary to mention 'Rural Studio', in which homes for the needy in poor parts of Hale County, Alabama, were created. This is a really fantastic idea to build beautiful and creative homes for people who lived in the worst conditions of the area – for free – and often using recycled materials like tires, hay, cardboard and carpets as well as local materials and designs that fit in the environment they are built in. Moreover, these work is truly beautiful, aesthetically pleasing structures as well as it's high quality art of architecture, using donated and found materials. There is something to be learned from that.

Moreover, there is another example to mention from the sociological point of view, such as this year's UK practice of recycling bus parts into shoes. This is an

exciting project which came about after Transport Recycling in Partnership (TRIP) decided to find new ways of recycling transport industry waste. The outcome was the trainers made from recycled bus seat covers and tyres, which have proved an unusual fashion accessory. Thus, the company, which operates busses across the UK, provided materials from its old buses for the project as part of its commitment to sustainability.

Secondly, a lot of examples of recycling industrial objects can be found in ethical embodiment. Such artists as Richard Wilson and Jeff Wall could be mentioned for their contributions to the ethical aspect of recycling. For instance, such sculpture as Wilson's 'Slice of Reality' is indeed a piece of a 600-ton dredger recycled into artistic construction. Wilson

is a kind of magician who can transform anything from a window to a room, building or boat into something extraordinary, unexpected and even surreal.

Furthermore, the experience of recycling old subway cars in New York is concerned with a recycling disused industrial object from the



Figure 1: Routemasters for scrap at Streatham Garage, UK

ecological point of view. New York City's Maryland Transit administration (MTA) made more than 1,200 retired subway cars available for a new purpose – to help form artificial reefs and become habitats for marine life. After decomposing the subway cars, New York Transit stream cleaned the cars, which were loaded on barges and 'buried' at sea.

On the other hand, our world also knows the examples of a negative health and ecological outcomes from recycling, such as Bangladesh Ship Breaking Yard. Ship breaking or ship demolition is a type of recycling involving the breaking up of ships for scrap. Ship breaking allows for materials from the ship, especially steel,



Figure 2: Clarification of Routemaster parts for their future reuse as the key building material

to be given a new life in a new vessel. Nowadays most ship breaking yards are in developing countries, principally Bangladesh, China, and India, due to lower labour costs and less stringent environmental regulations dealing with the disposal of lead paint and other toxic substances. However, whatever negative or positive health and environment outcomes, because of this industry millions of poor people in the country directly or indirectly make a living in Bangladesh which is truly a health calamity.

All in all, the consideration of the above recycling examples, although they are all within different purposes and with different outcomes, consolidates my understanding of the fact that in the time of constant changing of our cities greater community support and acceptance of recycling manufacturing parts are critical to the future of the industry. Recycled industrial objects can offer savings, creating value for our community as well as recycled objects are important, affordable, low-cost alternative raw material for architectonic constructions.

As long as the technology and, thus, the city itself are constantly changing it makes me think about the industrial objects which have no space in our cities anymore and which just create massive amounts of garbage in our world. This raises the following questions: What will happen when the cities require other way of production of the raw material for our constructions? And will massive amounts of garbage left in our world be used as raw building material for our cities? Will recycling old vehicle objects into architecture become a solution? How will this architecture appear? What shape will it take?

Firstly, I was critical, because collaging the existed objects and recycling them in this way reminded me of postmodern architectural strategies. Secondly, it is quite economic to harvest free raw material from the scrap yard's sources. Third, using ready-made raw material means liberation from having to design the raw material. And, fourth, creating the new form of architecture which is recycled from the already existed raw material demanded a change of my architectural point of view ruled by building the architecture out of the material



Figure 3: Possibilities of creating architectonic forms through recycling the Routemaster bus parts

normally destined for the architectural construction. This goal of recycling and re-invention of the industrial seismic objects denoted for me the way of re-fabricating a form, so that it has a new and improved life and perhaps a completely poetic or new 'higher level' function.

Thus, I chose the famous London icon – the Routemaster bus as industrial raw material, because it has no place in the city's development transport network anymore. Routemaster was a fixture of the capital's streets for half a century, a moveable landmark equally beloved of both locals and visitors, but on December 9 2005, the 'RM' chugged into compulsory retirement and only a couple of heritage routes are left for them nowadays. 2875 Routemaster type buses were built from 1954–1968 as well as over 600 (most of them refurbished) were still in service in London in 2003. Nowadays, large numbers are preserved or used for a variety of purposes as well as could be found in different garages for scrap.

To evolve my way of work I am referring to Jean Tinguely's 'Pit-stop' sculpture, as well as Kurt Schwitters' 'Atelier Merzbau' in Hanover. Since the ideas for these projects are tightly connected to collaging of industrial materials left in our world I became particularly interested in the way how these artists reuse this stuff. Although Tinguely connected his way of working method with science, the sense of imperfect machinery can be clearly seen in his works. Many of his artistic constructions function as sculptural machines, having no utility other than an aesthetic one. Tinguely's sculptures are theatrical machines which function, take very

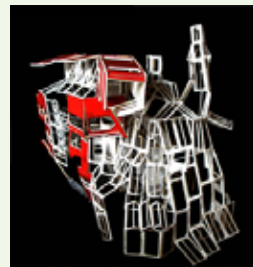


Figure 4: Creating architectonic forms through recycling the Routemaster bus parts

different forms. As we see in the special section on Tinguely in Taschen's book 'Art of the 20th Century', he 'transformed the machine into a theatre of the world in which an overwhelming urge to live and metaphysical anguish are discharged in the vibrations and noises of mechanical parts, bits of scrap metal and trash'

(Pardey, A., Littmann, K. 2008: 181). Thus, Tinguely's way of collaboration with science could be interpreted as a satirical reflection on our technological society, as imperfect and dystopian machinery.

Assuming that Routemaster bus scrap yards are a depot of supplies of the raw material for the architecture, I am clarifying the parts of the object

Clockwise from top, figures 4, 5 & 6: Creating architectonic forms through recycling the Routemaster bus parts

by taking the model of the vehicle apart (Figure 1, 2). After the parts of the object are clarified I need to construct the project in adaptive design-and-build process. To do that, I refer to the work of Kurt Schwitters 'Atelier Merzbau' in Hanover. The way of Schwitters work can be defined as a dismissal of traditional attitudes to art and assemble of found and collected objects. Starting in the 1920's and continuing until he fled Germany in 1936, Schwitters constructed an enormously ambitious work of art in his Hanover home: 'Atelier Merzbau'. It was a vast architectural construction. Ernst Schwitters, his son, said that it started with his father's interest in the relationship between the pictures he hung on the walls and the sculptures on the floor. He started by tying strings to emphasize these interactions. These in turn became wires, and then were replaced by wooden structures which, in turn, were joined with plaster. The Merzbau grew and grew, eventually filling several rooms on various floors of the house. Thus, the collage of industrial material became an architectural construction in Schwitters work.



In the same way as Kurt Schwitters was assembling his found and collected objects, I am configuring and organising the clarified components of the Routemaster bus into dynamic architectural structure. In other words, I am creating the inventive composition out of the scrap objects, which transcend function and become ornament (Figure 3). These consolidate my belief that the Routemaster parts can be used as efficient raw material for constructing the architecture as well as provide a possibility for creating an unpredictable structure with architectonic characteristics. At the end I got a new architectonic form based on the industrial seismic object, gaining it from reassembling and reconstruction of different sets of object's clarified pieces. Moreover, a ready-made industrial



object, such as Routemaster bus, is now formed into a new surface and it's still expressed and recognised for its original meaning (Figure 4, 5, 6, 7).

Thus, in this article I have shown the ideas of how to design an architecture based on the recycling of industrial seismic raw materials. The idea is developed such as how to create a sustainable architecture in the UK out of the already existing raw material – Routemaster bus, which is a passing of object that has been an icon of London through years. This kind of architecture can offer a fresh perspective on the vehicles' iconic contours. The technique which I am developing shows how to make a sustainable architectural construction and to release the country from the massive amounts of waste left on the scrap yards. I am identifying a way towards a new architecture – a magical one that composes itself from 'out of service' seismic industrial objects.

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No Advertising Streets

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HAVE YOU REALIZED THAT commercial streets, as centers of communities in big scale, are only seemingly flourishing and full of strangers under beautiful masks, between whom driven by advertisements communication is always absent?

Have you realized that commercial streets do not belong to you but the merchants, since they could show their seductive advertisements but you did not have a chance to tell other people they were lying, and you were charged for just having a seat talking with an old friend?

Have you realized that commercial streets are only built upon the desire of making money and the desire of spending money, since you saw peacockish women rushing into a LV shop which posted an advertisement of 15% discount for purses?

The problem is that the inequality of information exchanged between consumers and merchants is inevitable – merchants are always the talkers, publishers and offenders thus consumer are, or have to be listeners, readers and defenders. Consumers do have the right of ‘vote by feet’, but a decision always comes after a try which means probability of an unsatisfactory experience.

What if we have No Advertising Streets in commercial areas?

On the street, building façades are equipped with interactive system which is supported by internet and digital screens unveiling former customers’ evaluations for the goods, instead of merchants’ braggart billboards. There are also movable booths in open spaces offering people platforms for information searching, free talking and self acting. There are mature managing teams to take care of organizing of all activities, guarantee fairness and draw attention of the communities on the streets.

On the street, you share comments on particular products you are interested in and make your voice heard by producers. You chat and play with each other, making the street deposited with various memories. You contact your friends outside the No Advertising Streets via internet who are going to telling you that a male commuter on London subway can not help touching his chin while David Beckham is smiling upon him on the advertisement of shavers, and even more ridiculous in a small town in China, a naked pornographic star’s image in front of a cinema drives a flock of juvenile rushing into the forbidden area.



The informational City as the Postmodern Babylon

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SPEAKING ABOUT SUSTAINABLE LIVING and the city decades of topics can occur in our minds, dealing with: green spaces and CO₂ emissions or social housing, employment opportunities, even crime. This article, though, will focus on a topic that goes back thousands of years, but still remains current: the challenge of human communication.

Babylon is a great city of Antiquity whose myth derives from the biblical passages. God confused peoples' language to deprive them from communication, as a punishment for their human arrogance. The confusion signified the destruction of Babel. This story teaches how harmful, occasionally catastrophic, can be for a society to lose understanding and communication in-between its members. Babylon is used today in order to address questions of alienation, failure of communication and destruction of identities, especially in the megacity of diversity, multiculturalism and anonymity.

This article has two aims: first, to justify the conceptual relation between the Babylonian myth and the current 'informational' structures of society and economy, that have transformed the living in the postmodern city. Similar connections have been made previously in art and literature for the, modern, industrial city and representations of Babel (i.e. *Metropolis* novel and film 1926–7). Second, it envisions a new interactive style of sharing our public space, which could be applied in localities, contributing to a sustainable city living in the future.

To continue we need to refer to the fundamental notion of the *informational city* that Manuel Castells has introduced (1989). Therefore, informational is the historic technological revolution of the last quarter of the twentieth century which has changed

the fundamental dimensions of human life: time and space. We now experience an emerging *place of flows*, where is hard to define real places. The social structure of this place is based on microelectronic information and communication networks (internet and electronic machines such as computers, telephones, mobiles, faxes). Under such circumstances, do people really communicate in the postmodern city?

Several bibliographic sources explain that interpersonal relations have been narrowed by the mediatized means described above. People are increasingly solitary in the urban environment, regardless of other peoples' presence; as in 'crowds of strangers'. Marc Augé refers to *non-places*, such as means of transport, stations, cable and wireless networks, and explains that there is a need to advance an *ethnology of solitude* for the future. From a similar perspective, Michael Bull argues that communication technologies provoke the neutralization of urban space, and calls them *technologies of separation*. He also talks about an *iPod culture* which can transform any place into a non-place.

The iPod is a good example to understand the public space as an alienated space in everyday life. Isn't the extensive use of iPod around us an apocalypse? An apocalypse of people in the need of privacy, of people alienated from their surroundings, or both? As far as privacy is concerned, it is a well-respected human need that always needs to be addressed. However, what about other human needs such as social interaction, identity or security? It is possible that the increase of privacy causes an imbalance, such as a decrease in social interaction or feeling of security, fact capable to provoke further urban ills.

So, it is time to decide what kind of public space do we want, and choose: to start advancing an *ethnology of solitude* or to reverse the trend of solitariness? In the first case, we need to start considering the public space individualistically. But isn't it oxymoron, since the public space is supposed to be 'shared', by its own means? In the second case, we need to struggle with new ideas for re-integrating individuals in the social life of the public space. This is one of the several challenges of sustainable city living.

The scale of community is the most appropriate and crucial for taking initiatives. As Castells points out, the informational city of the future will be challenged to *reconstruct the social meaning for localities*. On these *localities* we really need to focus, in order to define the future of the global.

He also indicates three levels for intervention: the cultural, the economic and the political. Especially in the cultural level, I would emphasize another element to compliment intervention: *interaction*; because aspiring interaction is the way to struggle against solitude. Therefore, public space should allow, and pursue, interactive behavior.

As cultural example, let's consider a public art project implemented in a locality. The first crucial element should be the initiative and engagement of the local communities in the project. This could underpin the local identity, the sense of community and, perhaps, a success for the project. However, there is a second crucial point; is this kind of project capable of effecting the 'visual community' around it? This question refers to people being next to each other, anonymously and randomly, sharing the same public space. Is this work of art capable of bonding around it, in any way, the visual community? If yes, then we should consider it seriously, as a way to improve social space.

In the industrial era, the use of culture for its humanizing effects was a fact; music, for example, was considered to improve aesthetically and humanely the workplaces. Respectively, in our times there is an urgent need for interventions that encourage citizens in feeling friendly, pleasant and safe in the social space of a megacity. We better take our chances in improving this space in each locality, as well as bonds between people in it; before the mythical collapse becomes a realistic threat.

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Breaking Down the Essence of Community

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LIVING IN LONDON CAN BE QUITE an intense ordeal. And while I enjoy being surrounded by so much inspiring stuff, at times the consequences or urban living can get a bit much: Piles of cardboard piled up outside shops waiting for the bin man, skips full of wood and bricks, demolished furniture in front gardens, cheap mattresses propped up on a street corner, plastic bottles in street bins, abandoned old TVs, discarded rail-side fridges ... if I carry on I might get depressed. (I must point out however that it's not the presence of the things that I can't bare, more the fact that it's all going to waste. I can't stand it!) No prizes for guessing then that I find these things hard to ignore. And rather than sitting there getting down about it all and waiting for the world to bring me down with it, I set about trying to do my bit for the greater good (and a little for myself too).

As a result, much to the annoyance and disbelief of my partner, I hoard. Apart from simply never throwing anything out this also involves the occasional rummage through a bin or two, trips to the 'gold mine' (or the 'dump' as I understand it's commonly called) and diversions across the street to a freshly spotted skip... Basically I seem to have developed an overwhelming desire to reuse or recycle anything I see which could be considered, in my eyes, even remotely useful. Where did I catch this bug? Have I unconsciously latched onto the green craze and taken it too far? Or do I just care too much for my own good?

For a while I thought I was the only sane person with a roof above their head that acted this way and so I conducted these 'rubbish delvings' somewhat sheepishly to avoid awkward encounters with normal people... I now know that I'm not alone and networks

such as Freecycle are testament to the fact that people out there do care. So why do I still feel embarrassed? Why should I feel reluctant to stop the kettle a little early to save energy, or salvage something from a skip in broad daylight? With all the current emphasis being made on the state of our landfills and the impending doom of global warming, shouldn't everyone be raiding bins and only showering once in a blue moon?

Perhaps a more appropriate and pressing question may be to ask: Why do so many people (the silent majority) still act without thought or consideration when they should be living sustainably, with care and respect for their environment?

The answer to me seems relatively obvious, although admittedly complex in application and resolution. It is two fold and is at once as much an issue of attitude, as it is about the essence of what community IS in the first place. Let me try to break this down:

Along with the benefits of security and aid as driving forces, communities are made possible and developed via a natural mechanism derived from our ancient (but often still relevant) need to assess whether the thing we see before us at any given moment is a friend or foe, food or not, useful or useless. It is something that happens before we even have time to realize we've done it, and it is something we do all the time; when we are introduced to someone new or as we walk down the street and pass people, we 'judge' them in an instant (but often wrongly, as we shall see); likewise if something takes us by surprise we must act quickly to determine what reaction is required (although an embarrassing yelp and uncontrolled leap backwards is the usually the most common resulting action...)

It is this inbuilt 'judging mechanism' that is so essential in developing relationships and communities, in order to ensure we are mixing with the right people and staying clear of those we find threatening or undesirable, as well as helping protect ourselves and others from harm.

This of course also causes problems. Our unconscious necessity to judge has an inherent fault whereby we can be mistaken by what we see and judge wrongly ('never judge a book...'). So what people tend to do in order to make sure they are not misjudged is to 'fit-in' as best as possible, to act as others do, look as others do and generally not stand out – a sort of natural conservatism if you will. Anything that stands out from the crowd will be excluded or 'judged-out' unless the majority or an authoritative/respected figure can be made to think otherwise (think back to the frosty

reception of Darwin's theory or to the first declaration that the earth was in fact round!) This then leads us on to the issue of attitude, for it goes hand in hand that if ye shall judge, then ye shall be judged: The attitude we are addressing develops from the very essence of this 'judging mechanism' that I have attempted to break down.

I find it gets interesting when applied to the idea of sustainability.

COMMUNITY AND THE ISSUE OF SUSTAINABILITY

Currently, at least in a city such as London, it could be said that (in perhaps over-generalized terms) the majority of people are passive 9–5 consumers in one form or another. It is a community distracted by celebrity, gadgets and money, catered for in amenities and comfortable luxuries and separated from nature to the extent that many inner-city kids have never even seen the countryside or a cow before in their lives. This is a worrying sign. How is someone who has never experienced the natural environment for any period of time expected to understand concepts of sustainability or the consequence of his actions?

With a community stuck in this rut, it seems unlikely that anything can change quickly. In fact it seems more likely that people will carry on as they are until one day the shit really does hit the fan. But it is futile simply trying to change the world on your own, for one day everyone else will simply bring you down with it anyway. The only option must be to change people's attitude towards the world and how they see themselves and other people in it. Only together can change really happen.

But how can this be done?

In London I have come to realize that with a little effort and patience (and some balls) it is quite possible to live almost entirely off the waste of others (potentially a kind or partial freeganist existence). And by waste I don't just mean mouldy banana skins and fancy un-recyclable packaging. Amongst this there is an *unbelievable* amount of reusable, recyclable, fixable and perfectly good material. And as much as I enjoy sorting through and putting these things to good use, it actually makes me quite mad. It shows just how many people there are out there who are willing to throw away all this without even thinking.

Now part of this, as I have attempted to briefly mention, is down to an attitude born of its environment, but also, as this is the majority we are speaking of, the

'judging' mechanism behind community that prevents people from acting any differently for fear of exclusion. The reason you never see a man in a suit rummaging through a skip is because a) he doesn't want to be seen doing that kind of thing and b) he doesn't think he needs to ('why when I can just buy a new one?'). This isn't necessarily an issue about saving money; it is about saving the planet.

Surely it's not right for me to feel isolated from the community because of my efforts to lead a sustainable life and make up for others while I'm at it! The reason I feel shameful or embarrassed about rummaging is because I care about what other people think about what I am doing, because I know people are judging me as to who they think I am and how I fit into their community. This has to change. Government initiatives can only take

us so far. The real change will come about on a social level through the transformation of people's attitudes by sharing, understanding and communicating. There is no longer any room or time for ill judgments and stigmas.

It is too easy for issues of sustainability to become crazes, trends and investment opportunities without letting the real core issues sink in and take effect. If people's judgment can be changed (based on the perceived individual/collective importance of the issue), attitude will follow. Keeping up with Joneses just encourages endless consumption and a striving for acceptance. Why be a sheep and instead lead the Joneses out of their dark hole and to a better place. But to be lead they must first lose their conservative judging ways and open their eyes to a new world of change.

Evelyn's Ladder

Thomas Pearson, Bartlett School of Architecture

SWANN, a dealer

WILLIAM EVELYN, employed by the Bank of England

GRAHAM BICKLEY, formerly a bell-boy

In response to crisis, and as a means of exposing and regulating previously unchecked social mores of colossal individual greed, the Bank of England has subsumed the shadowy business of the financial reference agencies. Now, as a core procedure in its role as overseer of currency and economy, the Bank surveys and archives comprehensive personal and financial information on all consumers.

Further to this, the Bank now coins and issues compulsory lead weights to symbolise the burden of personal overspending.

A senior official at the Bank of England has fallen foul of his own regime; on the day of the reckoning he knows will crush him, he undertakes a journey across London that will lead him to its weak point, the lynchpin.

Behind Swann's bulging eyelids,
wine-swell, warm and pulsing skin-full,
he sees the spires ablaze.

He sees, in damp imaginings, a dark
landscape of speckled flares, field of supernovae
spreading from a single beacon source.
Booze-spun hazy widescreen opens out in
hues of orange, burnt sienna, furnace
umber; autumn sky a-glow, all screams of
luckless burning birds and vesper sirens
wailing Rise! Apollo!

Close at hand, the red-brick Bunhill spire ignites;
ivy flames reach out to curl around the
upper cube, exploring sheer concrete sides
and licking out the dove-holes. Furious,
the birds erupt and flail and spiral dive
to blackened-feathered ashen smacks on ruddy
Old Street rooftops.

Swann looks down; he perches on a needle point
a mile above the Moorfields, precarious,
the obelisk of old Saint Luke¹; brogues upon
a burnished orb; a pole is grasped between
his knees; upon the vane itself he hangs
from clammy fingers; horror scabble;
greasy purchase. Kiln winds push the vane;
his lurching mass begins to whirl
around the ball, now orrery,
now mechanism apogee,
in ever wider arcs
and ever spinning, wilder arcs.

William Evelyn's face

is grey, sharp, bird-like; scarred with old book-keeper's furrows. Small, rapacious eyes and frameless lenses. Tawny silk tie: narrow windsor, up and under, over, unembroidered, pulled hard, smooth, symmetric.

Crisp white shirt, and slender pin-stripes, grey on darker grey. A single inside pocket, crimson piping, holds a small black notebook filled with dancing, cursive ink.

Hallway robing; Evelyn dons a charcoal overcoat and carefully adjusts a long and broad black ribbon, clasped around his neck, to lie (as is required) visible, atop the twill. He unfolds his lapel to fend the cold, pushes up through narrow neck-gap; silver clasp nips collar closed.

Reckoning day, once a week.

The spire in Lonsdale Square is orderly, well-mannered; all familiar faces, now, and glib well-wishes; civilised.

Only once had Evelyn seen a neighbour (Lonsdale man, and nice enough) appealing at the Royal Exchange, ribbon laden, caked in droppings, wailing curses, double-anchored, double-bowed; his leisure days some grave mishap or avarice or recklessness had ended soon, and savagely.

Grey linoleum expanse

and snaking fabric fences;
invariable plummy voice
announces

cashier seven, please,
and glowing numerals agree;
arrow to the perspex.

All are called for reckoning, and
all receive a certain wealth of
coinage seldom asked-for:
plumb pounds, poison pennies,
issued, coin on coin, by clerks
at desks with scales and screens.

Lions guard the slips and pens
and uniforms and handcuffs,
roar a Gill Sans BANK OF ENGLAND
over all proceedings.

Fair avenues of flocking hundreds,

doves of finance, bearing messages of
flourishing and ruin in their claws,
ambassadors and envoys of the Bank of England.

Flapping radials emerge at Bank, and
branch away across the map of London;
clear linking lines span airspace, cooing,
racing over heads of bankers, mercers,
window cleaners. Each spire is an aviary,
and serves a neighbourhood, dispensing lead
in due accordance with the airborne missives.

Summaries of names, arrears, needs and
promises, desires, borrowings and
spendings, are provided by all clearing
banks and lenders, councils, card suppliers.
Processed, archived, averaged, and finally
consigned by dove, such numbers are received,
assembled and deciphered in the spires;
ladder-climbers,
dove-keepers,
weighing-clerks.

Leaden coins are sewn in ribbons, week on
week, as measure of all dues unpaid, and
worn around the shoulders, hanging down
below the knee to knock and swing; and by
inference, by a sense of physical
response, a reasoned swing of income and
expense, and hence Micawber's happiness.

From excess
comes heaviness:
all are judged
by bow of back,
by hang of neck.

No pardon for his rank, nor for any;
leeway only in arrival.
Evelyn has the morning.

Leaving Barnsbury as clockwork, Evelyn
passes Lonsdale by. Now Goswell Road; now
King Square, ring of spires, bridges halfway-high,
where Muswell Hill main-line divides,
and smaller, lower local branches fly
to Lonsdale, Bunhill, Percy Circus.
South-south-east, he passes old Saint Luke,
sun-hardened, seared one-horned bull,
muscle-flanks held grounded, pinned immobile;
fierce, rearing obelisk and solar ball.
Now Golden Lane, now Barbican,
now rising to the Highwalk,
overcoming London Wall.

Rise, umbrellas all.

It rains all day on the Exchange,
on Drapers, Duke, his Copenhagen.
Cornhill sleet-churned yellow-pale;
Gresham Street is drain-clogged; viscous
pools of freshly-spattered cream
dry quickly to a pale cement.
Portland stone, Corinthian
or rusticated blankly,
splashed and pitted, crusted,
greying layers piling there
like clinic gloves discarded;
muck-flung fingers droop from windowsills.

Graceful spraying nimbus:
snowy doves surround a massive, dense-pocked, cubic
aviary.

Below,
Evelyn hands a dripping, glossed
umbrella to the doorman.

Unguarded? Maybe, maybe.

Foolish, now defrauded.
Evelyn's mind replays how Swann besought him;
in his lines and coxcomb manners hid a
diabolic snare.

William, he pleaded,
Will you help me?
I am finished.

Cavalier! So cardinal
of sins, is what was asked,
obliquely, over Mayfair wine,
in dandy-dance and drama.
Earnest words assuaged
the risk involved, obscured
reason, scale of folly,
naked disavowal of his
own accomplished principles.

Evelyn, brain for numbers, asked for ledgers;
foolscap proof was furnished; sworn effusive;
handshake pledges.

Evelyn signed away his name.

Now Swann, old Harrow Jereboam,
has vanished; his effects are ransacked; smoke
and mirrors now removed, his greed, affairs,
skulduggery exposed; and Evelyn,
boiling now, recalls the face he saw in
Mayfair, gross in memory; misshapen
glossy beef-drip lips now slobber
double-dealing, feeble poker bluff;
and he, the regal, learned Solomon,
is duped.

Spire clerks will mock him,
gaily sealing in the lead, and cruel
applause will flood the chamber as he rises,
slumps, and crawls on grey linoleum.

From his office

Evelyn gazes south-south-east toward the
Monument's blazing urn, considering
London shaped by crisis; new beginnings;
Wren and Hooke's failed avenues; a rehashed
medieval shambles over-reached by
Hawksmoor's sphinxes; riddles on a map
converging on Canary Wharf, on glassy
shards of sordid and beguiling power.

Droppings slap the window.

Papers picked and folded from a drawer;
line of fabric from his late wife's ball dress;
ribbon decoy; close enough.

The vicar at Saint Mary Woolnoth², poised in sombre Solomonic gloom, is mapping sun-brushed hieroglyphs. Vivid rays, piercing the plaque-lined nave, are fleshed by hanging Bible-paper flakes and pew-cushion fluff. His languid gaze, ranging focus, garners glossy aged oak, Georgian glass and golden candelabrum; he finds a broken bulb, a cobweb, ragged Book of Common Prayer.

His reverie is broken as the west door opens; flocking Exchange uproar briefly pours into his silence. Evelyn clicks inside, and click-clicks down the aisle, scanning the cubic space.

From behind, the vicar sees him choose a pew and kneel, head bowed.

Evelyn labours at his clasp.

Noon bells ring.

The vicar, soundless, gapes as Evelyn's ribbon slips. A briefcase clicks, and Evelyn rises, claspless, drapes a length of rich black fabric around his nape, clicks the case again, clicks along the pew and down the aisle.

Evelyn sees him.

Seconds click between professionals.

A clasp is broken.

Somewhere an alarm is ringing. Somewhere, on a screen, an icon flashes Evelyn, William James, and on a screen, a single flashing circle hovers on Saint Mary, while its owner, broolly raised, is walking down King William Street.

Square Mile eyes and prying lenses: priceless cover under nylon. London Bridge diverges from the dove-line; Evelyn, folding, exposed, hugs his briefcase close and clamps his bowler.

Horsleydown is boxish, brick-holed; dense; a hundred black cabs low and heave and herd from pick-up kerbs, down passages, and new Saint John³ is glory-less in brown facades. Evelyn, flagging and confused, is snagged inside the maze. He picks a nervous course to south-south-east; crouching, cramping; each clear view reveals a spire; every slowing car a prowler.

Early dusk at three o'clock,

no doves for guidance now.

Half-delirious, he sees the moon is
framed by blank warehouses,
risen early; pearl upon a purple cloak.

Now he is a silver fox; he shivers

in the velvet hush of gloaming. He pads
in silence; pauses, spellbound, facing, from
the road, the massive hulk of old Saint John
dead on; pinions firmly held, aquiline,
and spreading; nave absolved the bombs.

Now the Mission smells Ephesian; now the
grand Ionic order clamours moonward,
sings Diana, sings and howls a signal air,
which, by and by, is echoed in a
bugle cry. Across the river, keenly spied,
a whipper-in and hounds: a frenzied
ball of fur, saliva, foaming blood-desire.
Sinews, aged, pulled as wire, snap to race
and Evelyn flees the pack.

Gasping, haunches low and taut, the hoary fox
heads south-south-east with dogs and horses
in pursuit. Soon his ragged limbs will slow
and he will be surrounded.

Riders gaining, flanking; flash of red;
each man has a face he knows: malicious,
puffed-up, pinkish; all the same. O Luna!
Luna! Mercy! Mercy! All of them are
Swann.

Mercilessly wakened;

crazy sudden aimless dash
from hiding-corner;
brown-walled LCC empire;
high in Surrey Square a spire,
calmly eyeing; focus zooms and
snaps a blurry likeness
of a running businessman.

No spire in Burgess Park;

some office mix-up leaves a shallow half-build,
black mark on the map. In darker copses,
claspless ne'er-do-wells gamble, brawl, deflower.

Evelyn, haggard, rushes on; he needs one
more reliable: a local, one who'll guide
him south-south-east to Honor Oak, a ferryman
of filled canals; a bold and leadless climber
for the ladder Evelyn knows exceeds him;
a fuming soul, whose grievances will surely
flare revenge.

Off Sumner Road, a council block,
once Hordle Promenade, once boarded-up
and fire-charred, became the Peckham work-house.

Scrubbed virginal, reglazed, and manned; walkways
hum and shudder. Narrow rooms are packed with
lines of bicycle-like frames and flywheels;
slogans, one on one, proclaiming

Labour Now & Save.

Nearby, in shadows, sullen bearing, skulks
a young man in a mac, grey jeans and plimsolls.
He is fresh from Peckham work-house; auburn
hair is gym-soaked; ribbons flap around him.

Evelyn spies him, hails him. Graham Bickley
snaps abusive answer. Evelyn hails him,
hails him, asks him for incendiary help.
I am serious, he reassures. I'm serious.

“Fancy Rollers, mirrored black,
and fancy people, fancy places;
see us bell-boys break our backs,
carrying their heavy cases.

Sacked for fucking slouching, guv.
Do you hear me? Fucking hell.
As if the bags weren't bad enough
I dragged my bloody lead as well.

Forced inside, and forced to pedal
off my loans and all my spending;
chained down, fixed upon a saddle,
blinded, blinkered, screaming, bending

hard to push the wheel around.
Leadless, maybe. Bloody angry.
Yes, I'll help you, guv. You sound
as furious a man as me.

I'll lead you safe as houses, shy
of cameras, for a hundred quid.
Honor Oak? I know a way,
of course, I'm Peckham born and bred.

And as we go, explain your journey;
claspless! Now I see you clear.
Dangerous, your words of burning
spires; come on, guv, why here?”

Nunhead

pinnacles are sharp above the graveyard,
in memoria.

Evelyn follows now,
explaining hurriedly to Bickley how
the spires and doves and lead emerged, and how
their three-part logic, first his triumph,
now his downfall, quelled the city.

Hidden agencies unmasked, and lendings,
once invisible, made legible and
physical from Downing Street to Gin Lane.
Symbols, lines of meaning carried over
London, ages old, and locked in churches,
plague-holes, road-names, rumble low and ready;
Evelyn has unlocked them.

How a beacon rose by Honor Oak and
heralded armadas, bombers; morse-coded
for London; how a link of sun to moon
across a day is pulled almost to yielding,
Luke to Mary to John to south-south-east,
to Honor Oak, and how that line, if piqued,
if snapped and all released, will spring-whip back
and lacerate the fire-proof surface.

Finally, he tells of Swann and, spilling
over, fumes of how from malice he is
ruined, how his only hope is to undo
the same machine that harries him.

Bickley, laughing basely,
raucous, nods appreciation.

Dear Augustine, you scoundrel,

curses Evelyn. Sirens howling, he and
Bickley scramble up to Honor Oak.
On levelled ground below the beacon,
shutters down and cameras sprung for ambush,
is a doorway; Evelyn, heaving, punches
necessary numbers; pealing bells
explode around them.

Over grey linoleum, a door
beside the perspex screen responds again;
pushes to the weighing-room, where swirling
red alarm bulbs show machinery and
weighing scales, desks and endless shelves of files
which line the room from floor to ceiling. Cross,
and drop, and through a door; a narrow passage,
falling, falling, opens to a nave-like hall
with looming piles, arrayed in grids,
of dull lead coins in cages, gabions
of menace. Bickley, feral, shudders.

Evelyn indicates a ladder
hanging from a boss-hole in the ceiling,
yells above the blaring sirens,
simple orders, searching glance;
gripping Bickley's shoulder.
Go on, lad.

Bickley shimmies up the rungs

which rise and rise forever, brick-surrounded;
narrow holes allow the moon-shine in to
glow his short-breath vapour. Limbs a-quiver,
Bickley finds a door and pushes upward,
climbs into a narrow space, braced for
pigeon-fancy mess;

and sees instead a
gleaming, inky purple-black array of
cases, wires, camera gear.

Overhead, a second door. He reaches
up, recoils from reek of birds, and, snarling,
dowses all with livid oil. Before his
England's Glory spark, he leans a camera
back and peers from a dove-hole over
London's foxglove gauzy darkness. Down below,
a whirling blue; police cars come to find

he pauses

wonders Evelyn's anger
wonders why a man of power
may escape what he endured,
aching days of pushing, crying

wonders why a man of privilege
be spared a flywheel
and a harness

both of them
have spent more
than they own

he pauses

feels his clasp
his ribbon
realises
he is clean and
balanced

sirens ring

and pause

he pauses

lower door is opened

a man in uniform is saying something.

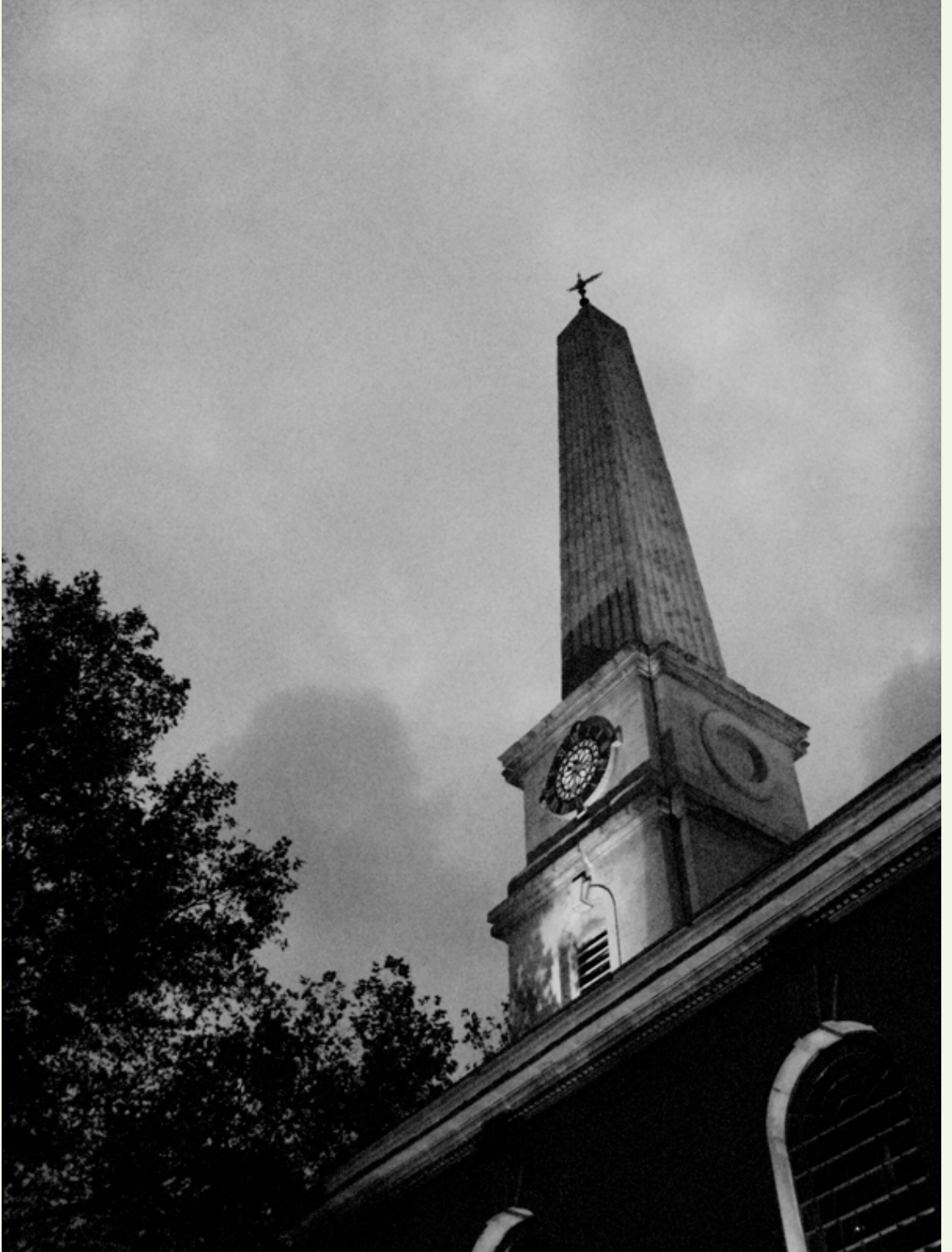
Photographs

1. *Saint Luke, Old Street* (1727–33). Spire designed by Nicholas Hawksmoor (c1661–1736) in the form of an obelisk, commonly linked with sun-worship after its Egyptian origins in dedication to the sun-god Amun-Ra. Caesar Augustus employed obelisks in Rome and Alexandria as solar symbols, declaring his rule over both the world and the cosmos by this association, and claiming lineage from the Roman sun-god Apollo.

2. *Saint Mary Woolnoth, Lombard Street* (1716–24). Designed by Nicholas Hawksmoor. The church, metres away from the Bank of England, has a perfect cubic shape, associated by freemasons with the Temple of Solomon, and features two twisting 'Solomonic' columns in its reredos. Solomon's temple represents the pinnacle of architectural splendour in the Bible, a palace of supreme wisdom, and a building uniquely venerated in Masonic lore.

3. *Saint John, Horsleydown* (1727–33). Spire designed by Nicholas Hawksmoor in the form of a single Ionic column, a device believed to have originated at Temple to Diana in Ephesus, one of the seven ancient wonders of the world, and hence associated with moon-worship. Diana was also goddess of the hunt. Saint John, Horsleydown suffered heavy damage in the Second World War, was demolished in 1970, and replaced in its churchyard by an office for the London City Mission.

I.





3.



View of a Sustainable City from Across the River

Kateryna Peremanova, School of Slavonic and East European Studies

BIG CITIES IN AMERICA AND EUROPE are great. My heart pounds when I think of bustling sidewalk cafes or artsy installations in the middle of busy streets. Add to this the excitement of comparing subway systems and underground stations in different capitals, and you will see that my loyalty lies with urbanity. If big metropolises made it to the top of my list, they are certainly an ongoing concern for infrastructure developers, utilities companies, urban planners and city dwellers. Cities present real challenges and opportunities, both economic and ecological, so a considerable amount of energy has been dedicated to urban sustainability. At the same time, places that sit on the margins of a big city and are hugely important for its vitality, are usually dubbed urban sprawl and receive less attention. However, these places may hold the key to greater sustainability of metropolitan areas at large. While city dwellers bike, recycle and take public transport, these green trends are not spreading in the immediate city outskirts as quickly as we would like. So let us give more thought to what it takes to bring these areas up to speed with green development. When we do, we will have to

think more inclusively and strategically about those who live right outside the city boundaries and their perspectives on sustainable living from ‘just across the river.’

For all the glamour of New York City, many aspiring first-comers find it increasingly difficult to rent in Manhattan due to high prices. So they get together with other aspiring and low-budget young folks and rent loft apartments in Green Point, Brooklyn, with three to four people per flat. They are never too far from downtown New York, going to school, working or sharing an art studio there. If you were to glance at their resumes, you would see that these young adults are mostly middle class, collegeeducated, and come from everywhere in the states or abroad.

In other words, the demographics and life styles of these groups are similar to those of the rest of New York City. Separated by two subway transfers and perhaps a bus ride from Manhattan, they are not at all marginal. And, just like other city dwellers, they are eager to get on bikes, recycle and shop at farmers’ markets over the weekend – an individual portfolio of sustainable city living. (To tell the truth, these guys are already doing their part when they room with each other, greatly reducing their water and electricity use.)

This is not the New York that I got to live. After finishing college, I moved to the city in search of interesting jobs and ideas. I got a room in a house in West New York, a residential area in New Jersey right across the Hudson River from Manhattan. Most of my neighbors (and both of my flat-mates) spoke Spanish as their first language. Their parents came from all over Central and South America: Colombia, Puerto Rico, the Dominican Republic and Ecuador. To say the area was uniformly poor would not be correct. Property overlooking the Manhattan skyline sold at much higher prices than the average. But the more you walked away from the river and into the heart of West New York, the more you saw stores that had been shut down, houses that were abandoned, all against the backdrop of liquor outlets and a Catholic church. ‘So close to New York, yet so far,’ was the way I came to see this part of New Jersey. Foreclosure signs and car sale notices did not give me an impression of vibrant social life in our neighborhood.

Yet the lives of West New Yorkers were deeply connected with New York City. My roommates worked in retail and customer service there. Looking at the number of people on the train at seven in the morning, clad in jeans and sweatshirts, I could tell that their paychecks originated somewhere between lower Broadway and 96th street, but that did not involve office work. The key

to their economic success, which during the crisis felt more like economic survival, was public transit.

The Hudson Bergen light rail train to Hoboken terminal and a PATH train into the city connect this part of New Jersey with New York, resulting in a less-than-an-hour commute. Public transport freed a lot of West New Yorkers from having to buy gasoline at a time when their blue-collar jobs paid less. The advantage of this infrastructure is obvious. It reduces the carbon footprint and road congestion. I applaud whoever came up with the idea of setting up public transit in this densely populated part of the state. The trick is, infrastructure is not the only thing that makes a residential area dynamic and its inhabitants mobile. The two critical factors are trust and security, which allow people to take full advantage of public transport and shared spaces.

Here is an example. I spent two months waitressing at a quite busy café on the Upper West Side. My closing shift two days a week required me to stay at the café until four in the morning. Getting home at half past four was a piece of cake, thanks to a bus which shuttled between midtown Manhattan and our house in fifteen minutes. I would never take that late night bus, however, had my neighborhood not been a safe area with low crime rates and low violence.

This is the point where our dreams for low carbon urban development have to be supported by our trust in our social environment. Trust is not just a matter of security in the streets. It comes from knowing that my neighbors have decent jobs which keep their kids well fed and away from violence and drugs. My neighbors and I had different motivations for not driving into the city. Gas prices were probably the main constraining factor for them, while I decided not to buy a car until I could afford a hybrid. Regardless, we all depended on public transportation, and thus, on each other to make our commute a safe one.

A lot has been said about connections between unemployment and crime. This link becomes even more apparent in a situation when we rely on public transit to get home from those late night shifts that allow us to pay those few bills. No city can be sustainable if its inhabitants are too scared to take a bus or metro at night. This had been the case in New York City during the late 1970s and 80s. Now that the city itself has become one of the safest in the country, it is time we turn our attention to its fringes in search for green solutions. Without West New Yorkers also opting for a train ride instead of driving a car, New York City can not truly be the beacon of sustainable transformations.

A nuanced understanding of social and economic conditions adds to the challenges of the already complex plans for sustainability. But only when these details are taken into account, we can build a green and safe urban space for all.

Consider this. Information and communications technology, or ICT has a great potential to help us reduce road congestions and emissions in a city. The so-called 'homeshoring' which enables employees to work from home a few days a week is becoming increasingly popular. It saves commute time and reduces the need to heat and light office buildings. As a result, we save carbon. Do we all benefit in the same way? The highly skilled workers who get the flexibility of working from home, office managers who pay the utilities bills and, ultimately, polar bears who float on everdiminishing ice caps do win. People who provide cleaning and catering services for office buildings do not win, at least not in the short term. Since many of these employees are Hispanic or black, the ICT-induced, sustainability-inspired initiatives will have dramatic effects on minority communities in general. If homeshoring leads to fewer hours worked, there will have to be alternative employment opportunities if we are to maintain safety in neighborhoods of West New York.

Many non-profit organisations today focus their projects on the largest cities in the world, in an attempt to make them more livable and carbon neutral. My experience shows that it is incredibly difficult to draw city boundaries and even more difficult to grasp subtle yet real connections between a community's economic and ecological health. And though I am still impressed by many cities' commitment to low carbon future, as expressed in their hybrid bus fleets or LED street lights, I realize there is more to it than meets the eye. This makes it even more important to think 'outside (the city) box.'

Co-creating Sustainable Terrestrial Water-cycles

Tse-Hui Teh, PhD, Department of Civil, Environmental and Geomatic Engineering

ALL OVER THE WORLD WE HUMANS are currently sucking the land dry of its fresh-water resources. This is caused by the dominant paradigm of piped networks of drinking and waste-water and the profligate use of pumps to extract ground-water resources. Neither of which indicate when demand has exceeded renewable supply. With no need to gather local sources of water, humans transform the landscape into vast impermeable surfaces which are more convenient for vehicular and pedestrian transportation; or massive expanses of monoculture crops convenient for mechanical harvesting. These combinations speed the flow of terrestrial fresh-water to oceanic salt-water. This is detrimental to the sustainability of aquatic and terrestrial life forms, including ourselves.

Before the ubiquity of large scale water transfer technologies human water use was regulated by the amount of water in the landscape from rivers, springs and rain. This kept human water use in check with local water-cycles and ecosystems, but the awkwardness of obtaining water would prohibit the large urban populations we have today.

How can we add to our existing suite of technologies so that more land based fresh-water cycles can be established to slow the flow of terrestrial fresh-water? This can be achieved by modifying how we use water; changing land use patterns for water retention; reusing water multiple times; tuning technologies to integrate with water paths and ecosystems; and

creating landscapes that attract and retain rainfall. This is an alteration of water technologies, ecosystems, institutions and management.

However, these steps can only partially solve our water problem. This is because the water-cycle is more than water molecules moving around and through the earth. It is also about the interactions with every medium it passes through. Water dissolves and deposits minerals, chemicals and particles, as well as transports bacteria and other living beings. Therefore wastes we produce from our own metabolic, production, or consumption processes, and derivatives from their decomposition, are often purposefully or accidentally transported in water. This distributes our wastes to unexpected places and contaminates land, water and food resources for people and ecosystems. The two simplest ways of preventing this dispersed pollution is to reduce waste and practice methods of metabolising our wastes into harmless and potentially useful products.

For ecosystems to emerge in which peaceful human societies reside, clean fresh-water sources need to be shared amongst people and other living beings. The water-cycle does not conform to the administrative boundaries around which people currently organise themselves. Water is in constant motion. It flows through boundaries, above and below ground, and surges as ice melts or in heavy rainfall. This inconstant resource can only be shared fairly if we collectively and individually know our responsibilities in the water-cycle and how to read and respond to the conditions around them.

For example, in the future we would know when it is an acceptable day to take a luxurious bath because this water comes from a burgeoning aquifer that needs be drawn on in order to prevent the flooding of homes near a wetland. This bath water will then be filtered for dirt, which will go to a compost heap and the water will be used to irrigate vegetables that store water for human consumption at a later date. Parts of the water will evaporate into the atmosphere, other portions will enter the soil matrix to be used by other living beings and filtered as it flows back to the aquifer. The flow of fresh-water remains in the terrestrial water-cycle. The use of this water was related to maintaining favourable ecosystems for humans as well as serving personal needs.

To be effective, this role needs to be as habitual as the choice of clothing most suitable for the weather. This individual water-cycle understanding also needs to be applied to agreements for large water transfers, which share water over national, state, county, local council borders and to ecosystem regions. Knowing our

role individually and collectively in assembling water-cycles and ecosystems will compel the design of new material configurations, boundaries, social values and administrative systems.

For this to occur, it also requires us to change our perception of the value of water. At present the monetary value of water and ecosystems prohibits sustainable water and waste practices. Until monetary value is seen as less valuable than the lives of humans in a healthy ecosystem, people will continue to make choices that only benefit monetary gain.

We are no longer a minor species living in diverse ecosystems. We are now a dominant species that has homogenised ecosystems. The totality of our individual day-to-day behaviours whether we live in the city, suburbs, country or forest, has extensive effects co-creating the ecosystem in which our descendents and we will inhabit. Whilst we face the same requirements

to live – air, water, terrestrial space, food, and the correct temperature range – our domination dictates that our ways of achieving these needs must change. All these elements we depend on are degrading.

We have two choices. We can learn to co-create ecosystems that include social and technological innovations that support our vast numbers, where our actions are prioritised by the knowledge that humans are not exceptional to nature. Or we can continue to believe we are exceptional from nature and allow our vast numbers to exhaust resources and thus give rise to new ecological systems that favour other species.

Finding a sustainable way to exist within the terrestrial water-cycle is just one example of co-creating an ecosystem. These evolutions have to interact with our other needs of air, terrestrial space, food and the correct temperature range to truly create a sustainable way of human life.

Post-Fossil Landscape

Frauke Uhlenbruch, MA Hebrew and Jewish Studies

ROSA AND I TAKE A WALK OUTSIDE THE CITY. We leave our Neighborhood and climb the slope. We find ourselves in the meadows. Rosa spells out the signs for me, shouting proudly when she makes sense of a name.

‘St-eel-mi-ll-walk,’ she pronounces and shouts, ‘Steel Mill Walk!’

‘Good job,’ I say. ‘How about that one?’ I point to another sign at the crossroads.

‘That’s long!’ Rosa complains.

‘Well, go for it! You know all the letters, don’t you?’

She nods. ‘Lena says there are 26, and in some languages more and in some languages less than that.’

‘Lena is a very smart woman, isn’t she?’ I smile. Rosa and Lena have hit it off well since Lena joined our Neighborhood when she was made feel like she couldn’t manage on her own anymore. When I joined, I was on my own with Rosa and not sure I could manage, when she joined, she was all on her own. We have a lot in common.

Rosa squints at the challenging long word on the sign and begins to read, ‘S-mel-ting-fff-urn. No. S-melting-furn-ace. What’s a smeltingfurnace?’

‘What does it sound like?’

‘Stuff melting?’

‘Remember how I told you how my dad’s granddad used to work in a steel mill? They had big ovens there, in which they melted the iron. Those ovens were called smelting furnaces. Which path today?’ I ask her. She points to the winding dirt path still named ‘Steel Mill Walk’ which will take us by the lake and in a semi-circle back home to the Neighborhood.

‘It’s my turn to visit Chesty,’ she explains. ‘Why are the paths called that?’

‘Because there used to be steel mills around here.’

‘Where are they?’

‘Gone.’

‘Why?’

‘They weren’t needed anymore, so they closed them down one by one and pulled them down.’

‘What happened to the people who worked there?’

‘They moved away.’

I enjoy my walks with Rosa. They clean up my brain a little. I put things in simpler words, because Rosa has little use for algorithms and statistics. With Rosa I get to step back from the details for a moment, but then find myself wondering what the truth is: is it all as simple as the words I choose to explain things to Rosa, or is it all as tangled up and complicated as the simulations I run at work? I sometimes forget not to work too much.

‘Tell me the story again!’ Rosa begs now, jumping up and down.

‘Alright...’ I give in. ‘A long time ago, there was a girl, who used to go on walks like this with her father. Sometimes they would walk through the moor.’

This is where Rosa asks what a moor is.

‘What’s a moor?’ she asks, grinning.

‘Oh, you know what a moor is!’ I scold her jokingly and ruffle her hair a bit.

‘Alright, alright,’ she gives in. ‘Go on!’

‘Once they came across a sign and on the sign it said, ‘Little Moor’, because that is what the moor was, a little moorish landscape near where the girl grew up. And the girl got a little scared, because she could see how new houses and factories were being built closer and closer to the moor, and some birch trees had already been cut down and the air smelled like plastic bags. So she asked her father, ‘Do you think that in a few hundred years, people will wonder why this street is called Little Moor when there is no moor, just factories?’

Rosa skips, ‘And, really,’ she continues for me. ‘A few years later, there was no trace of the moor left. It was all dried up and chopped down, the trees were chopped down I mean, and there were factories there. Were the factories steel mills?’ she asks.

‘Maybe,’ I say and smile. ‘Or other factories. Life in the city became very crowded and people couldn’t go to the moor anymore to get some fresh air. But years and years later, so many years that it needs both a mother and a daughter to remember...’

‘Like, eighty years? You know, Lena is eighty, she can remember on her own!’ Rosa always wants specifics. I grin. She’ll probably end up an engineer, too.

‘Then maybe more than eighty years. Well, the factories ran out of the raw material.’

‘Raw like potatoes!’ Rosa and I both chant at the

same time.

‘-and they had to close down, people moved away or they were just very very old and died and so the city shrunk-’

‘Shrunk like a cardigan!’ Rosa and I chant at the same time on cue and laugh.

‘So what to do? Rosa, what would you do with an empty city with empty factories that are good for nothing anymore?’

‘I would turn them into huge gigantic playgrounds.’

‘Would you plant more Chestys?’

‘Lill,’ she sounds so precocious. ‘There’s only one Chesty. But, sure, there could be a Maply, a Birchy, an Elmy.’

‘A Hazelnutty,’ I suggest.

‘You’re really not very good at inventing tree names,’ she says critically and frowns, then something by the path diverts her attention for a while.

We get to the tall chestnut tree, in its size still a loner between the newly planted smaller trees and Rosa runs ahead to check on the snail she has put into a hole in its trunk a few days earlier. I walk around the delicate tree babies the Agents have planted in this Claim. I seem to remember that a few years ago, re-planting a recently cleared Claim was quite a public event, probably made into one by whoever parented the Claim, drawing attention to their green-ness, to their ecological integrity, or their generosity. It was good for business when ‘being green’ was still new and distinctive and helped sales. Nowadays, trees appear anonymously overnight. I suppose people have taken a liking to the increasingly plantcrowded Claims. I wonder how much longer until they have to give way to new houses in the green belt around this shrinking city. Or how much longer until the big city, where everybody has moved, will begin touching this one, and I grin to myself. I’ve become so aware of circular developments lately.

‘Look!’ Rosa comes running with something in her palm. ‘It’s all hairy!’ she screams excitedly and extends her hand so I can see the caterpillar. It almost brings tears to my eyes. I remember touching the wiggly and strangely graceful little things when I was a child. I haven’t seen one in the longest time. I am more used to crushing cockroaches with a sandal now.

‘Isn’t it cute?’ Rosa asks, ‘Watch how it walks around!’ She giggles loudly.

‘Go put it by Chesty, why don’t you?’ I suggest and Rosa races off. I watch her curls jump as she runs. A sound intrudes and I wake up. It’s the alarm clock

telling me that it is six thirty. There is a dusty dawn shimmering through the curtains. It's time to take Rosa to the daycare and get to work. Why do I keep dreaming utopian illustrations from green propaganda children's books, in which the creepy old lady from downstairs appears teaching my child the alphabet? When I wake up from not feeling alone, I feel desperately alone in the rented bed of my rented third floor flat. In those dreams we live in a shrinking city, which trees have taken over kindly, not in an expanding one that makes me cough. The adventures of my childhood appear in my dreams, mixed oddly with technology I deal with at work. We had a name for a chestnut tree, which we designated to be our own, and we let caterpillars crawl across our palms. We knew which leaves to rub on bee stings or poison ivy so

it wouldn't itch. Being outside meant getting dirty in the mud and not getting invisibly dirty touching railings on public transport. I live in a threatening, disease-carrying environment - so I am told - and I wipe my daughter's hands clean of it every day (you never know). Maybe I dream because I feel bad. Maybe I feel bad because I never chat with the old lady from downstairs, maybe I feel bad that in the current economic climate - so I am told - I am not in the position to leave my job and move to the country. I really want my daughter to know what a caterpillar looks like.

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The Challenge of Sustainable City Living & the Scale of Community

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PRACTICES OF SUSTAINABLE CITY LIVING have been difficult to promote and even more so to adhere to because the principles are fundamentally against the way we have conducted our modes of survival for centuries. It entails less development, less growth and less expansion. Ironically the success of our survival is now leading us to a potential demise. Never before in

the history of time has growth in all senses (population, development) been so clearly related to environmental decline. Never before has improving the quality of life been related to acts of population suicide. But realisation is one thing and commitment to change is another. Scientists have been warning us of unsustainable development for decades. But the scale and pace of our behavioural changes have been minuscule compared to the scale and pace of environmental deterioration. There are many signs that this is going to be a losing battle. It is incredible to imagine something so wrong proving to be so difficult to change.

But why it is so difficult for us to change? A few clues to this conundrum could be provided by pondering the first question:

How important are local social interactions in the development of a community committed to living within its means?

Intuitively, one could say that social interactions at the local level have great potentials to develop a community (or communities) that adheres to sustainable city living principles, because of the potentials to exert influence over our peers based on familiarity. It is easier to influence, and be influenced by, people whom we

recognise and trust than by distant figures and organisations such as activist groups or the government. This is why advertising companies receive billions of pounds annually to develop ‘personal relationship’ between the brands they represent and their customers. As we tend to spend more time with the people in our networks than official bodies representing sustainable practices, it is easier for us to understand their concerns (e.g. friends). We do not need to make formal appointments, or be faced with presumptions of ulterior motives when we meet our immediate contacts. Moreover, because we know these people on a personal level, it is more likely that they will listen to what we have to say. Conversely, we are also likely to know the ‘language’ that they can understand so we communicate better. Familiarity therefore represents significant leverage individuals have over the people in their networks. The rate of success of forging consensus will of course involve multiple factors including, but not exhaustively, the level of personal relationship, power relations between parties, persuasiveness of the argument, and methods of approach. But by having familiarity is a huge advantage in developing a consensus on sustainable living.

But in modern day cities, the sense of community is often weak and people can easily move in and out of different ‘communities’. It is more difficult for communities to place restraints on individuals. Personal networks have become larger. Members are no longer limited to the few who live in our proximity. If the consensus of one group opposes one’s belief, it is just as easy to find assurance in another group elsewhere.

We no longer have the loyalty, obligation, or a sense of common survival as one may find in communities of the traditional kind, which are often associated with smaller human settlements e.g. rural villages, farming communities, or small industrial towns. In these settlements, residents often have strong interpersonal bonds and collaborate to work in the same industry. Livelihoods of households are more closely tied together as the limited modes of production placed the entire community to share the same fortunes and losses derived from the primary industry. The lack of alternative sources of assistance strengthens mutual help and may be crucial for survival. People are more likely to know each other because the population is smaller, and residents spend more time together. However, strong social ties may facilitate the formation of consensus, but they do not necessarily mean that these communities live more sustainability, or that they have the means

to change, or are more readily receptive of sustainable practices. Rather, it depends on the attitudes of people, and the capacity and resources available to them to sustain their lifestyles.

In contrast, communities in large cities are likely to be characterised by a myriad of loosely connected networks. Our acquaintances are not confined to a small region due to advancements in transportation and telecommunication technologies. We are more different, as we encounter people from wider backgrounds of trades, ethnicities, cultural values, origins, and interests. City living often entails busier lifestyles with longer working hours. We are more transient e.g. daily commute to work, business trips across regions etc. In this setup, personal time becomes limited, and we have to balance our attention intelligently between family, friends and work obligations. Consequently attention is switched quickly from contacts to contacts within our networks whenever it suits us best, and we detach our engagement when priorities are shifted elsewhere. Lacking time, burdened by obligations, and periodic needs to escape mean that the sense of collectivism hardly exists. We each care for our own.

Professionalised services also facilitate the dilution of mutual help as it can be easily replaced by paid services (e.g. nannies, hired handyman etc). We can decide to shop on-line, order takeaways and live solitarily in our spare time if we decide to. The detachment from community has become the norm. We have become more self-centred. Why should I suffer just because others do? If someone wants to cut down on their lifestyle to live more sustainably, it is their business. I deserve the comfort and lifestyle that I have worked hard to obtain!

Even when one has the penchant for a sustainable lifestyle, one’s ability to adopt it is subsumed under a myriad of contextual situations, which may constrain the conversion. Many of these factors are not mutually exclusive, but interrelated. These factors are potentially vast, and may include:

Socioeconomic factors: Personal wealth can dictate the level of lifestyle attainable by the individual. Does the individual possess the economic capability to ensure basic living standards for him/her to even worry about the secondary issue of global climate change? Education background is another because it affects the individual’s ability to interpret the arguments for and against sustainable living and thus influence subsequent actions.

Environmental factors: The environment in which the individual lives may dictate fundamental lifestyle choices e.g. to live without air-conditioning in a temperate climate is easier than living in the tropics. Geographical location of cities and their access to natural resources could significantly dictate the dominant modes of industry and energy production in the region (e.g. coal or hydro- power stations), or methods and types of food production, which have different environmental impacts.

Cultural factors: An array of differences for individuals ranging from lifestyles (fashion or holiday habits etc), which are interrelated with individuals' socioeconomic positions, to religions and their related practices, and national psyche. Citizens of developing countries would likely want to catch up with the developed countries through any available means they have.

Technological factors: Available tools and access to efficient appliances in different regions. The use of inefficient equipments may continue due to the absence of better replacements.

Political factors: The level of democracy in the place where one lives underpins one's ability to exercise opinions, or influence the government's actions e.g. citizens under a dictatorship will have a hard time launching community initiatives and conducting activities that are outside nationalistic goals.

Human factors: An individual can choose to spend time with people holding similar ideas and not those in opposition. There are also personal greed and ambition. Many people have an inscribed mentality that development equals improvement. To reduce development is to take a step backwards for them.

These factors suggest that making change through social interaction at the local level is not just an equation of personal decision making and influencing others, but one that is entangled in larger sets of constraints, which create inertia to change. Therefore to think that local level social interaction alone will be a more effective alternative to deliver change is perhaps too simplistic. The complexity of contextual factors requires global coordination, combined with specific setups that are sensitive to local culture, socioeconomic status of the people, environmental attributes of locations, and political regimes. Much of these have to be addressed at

the top level, which can then facilitate the environment for interpersonal cooperation to make positive contribution towards sustainable practices. This leads to the second question:

Government initiatives on the use of resources are one way to change the way we live, but is it more important to find a way to cooperate with the Joneses?

The short answer is no. To tackle sustainable city living requires a holistic approach combining coordinated actions from the top to the bottom. There are large structural issues which lie beyond the capacity of local level initiatives. Key functions of top level organisations regarding sustainable living include:

1. Getting the facts right: facts about climate change and impacts of our conducts on the planet. Urgent clarification on the links between causes and effects are needed as many remain inconclusive. Remaining doubts are often used by cynics and those who set to profit from this uncertainty as ammunition to attack the sustainable movement. This also entails dissemination of the concepts on a large scale so that the people, who want to convert, can access the information, and know what to base their practices on.
2. Lay out overall vision and coordinate local initiatives to achieve concerted actions: Misguided and uncoordinated actions by people at the local level may cause changes that are detrimental to positive changes, thus undermine overall strategies from the top. Governments need to get us all pulling in the same direction!
3. Redefine the concept of growth to incorporate environmental consciousness: This should be done through regulations, penalties, and supported by incentives and encouragement in order to encompass individuals and communities of different persuasions.

Governments are vital to this change as they control decisions that are out of reach by community groups. Forms of energy generation e.g. solar or coal, has environmental implications which dwarfs individuals' actions. Strategies for waste disposal, policies on deforestation, programmes on mass transportation and construction entail massive consequences that could

nullify reductions made at local levels. Furthermore, governments could potentially assist the formation of public consensus by encouraging local initiatives and being consistent in their own actions toward sustainability e.g. leading by example. After all, why should one make personal sacrifices so that the government can wipe it away with a stroke of a pen on some ill thought out proposal?

Reformulation of the concept of success should also be led from the top. Gratification by material wants and a culture of consumerism have to be toned down, and this can be greatly facilitated from the top. It is not that selfish acts are easy to conduct without getting noticed in an individualised society, but that acts of excessive spending and jet set lifestyles are continuously glamorised and promoted openly. Being trendy and fashionable is cool, and making tons of money is 'wicked'! In comparison, individuals making sacrifices for the good of others and those leading a frugal lifestyle are often less celebrated, less glamorous. Redefining what society interprets as 'cool' and 'successful' is needed. The promotion of best sustainable practice, public celebration of successful initiatives, incentives for the public to participate in sustainable lifestyles must be emphasised from the top, and delivered with strategies targeting all types of community clusters including business corporations, industries and individuals. School curricula encompassing sustainable principles should be strengthened to target new generations of citizens.

It is true that personal achievements rewarded by material goods can provide the drive for many of us to improve. But the culture of spending and desires to improve of the quality of life should be accompanied by the development of a moral conscience, which interprets accomplishment not just measured in material goods and excessive waste creation. The concept of sustainability and environmental responsibility for others has to be established into our social etiquette. Governments should take the lead by initiating comprehensive educational campaigns, and carry it through to local levels by intelligent coordination. The flow of efforts may not be strictly one way i.e. some may arise from local initiatives, but the successful ones should be identified by the top, and amplified through its resources to greater audiences.

Regulating the use of resources also has an important role to play. People have different motives. Some will be convinced by financial incentives, some by

moral obligations, and some will convert to it by copying what others do (i.e. positive peer pressure). Regulations are in place for those who will not commit naturally. Granted, regulations which produce true equality (i.e. equal impacts to all) are a myth. But regulations can get close to ensure fairness if the rules are applied equally to individuals. Human beings are naturally flawed with greed and selfishness, so volunteered cooperation with others is not likely to be taken up by everyone. Restraining excessive actions by individuals through regulation is required. The crux lies in fairness. If one has to sacrifice the standard of living enjoyed at current levels, it will be easier to accept with the knowledge that others are on the same boat. Moreover, many regulations change the context within which profit-seeking behaviour and competition takes place, thus limiting or preventing environmental damage.

Lastly, governments comprise public figures that are in principle, representatives of the people, and they embody the responsibility for public good. They should be sources of incentives and providers of hope to guide us to an optimistic future. They occupy positions to remove many of the constraints on individuals to conform to sustainable practices, by laying down the infrastructure and creating environments for change to occur more easily and incrementally. They could actively assist communities that want to change through information, resources, promotion and acknowledgement, and persuade those who oppose changes by regulations for the sake of public good.

The intricate processes of our lives that affect the environment are complex, and to tackle the problems in isolated pockets can only be a starting point. In the end, they must be coordinated into a large coherent movement with concerted efforts across the world, linking strategies from the very top to the cooperation of people at the very bottom. Social interaction at the local level has a role to play, but these processes can be facilitated by governments removing constraints and fostering environments for changes to occur. Consciously or unconsciously, we have all contributed to this mess. It will take the efforts of us all to get us out of it. Realising the problem is one thing, to take action is another, and the 'environment' conducive to effective actions is another. A global cooperation at all levels is what we really need.