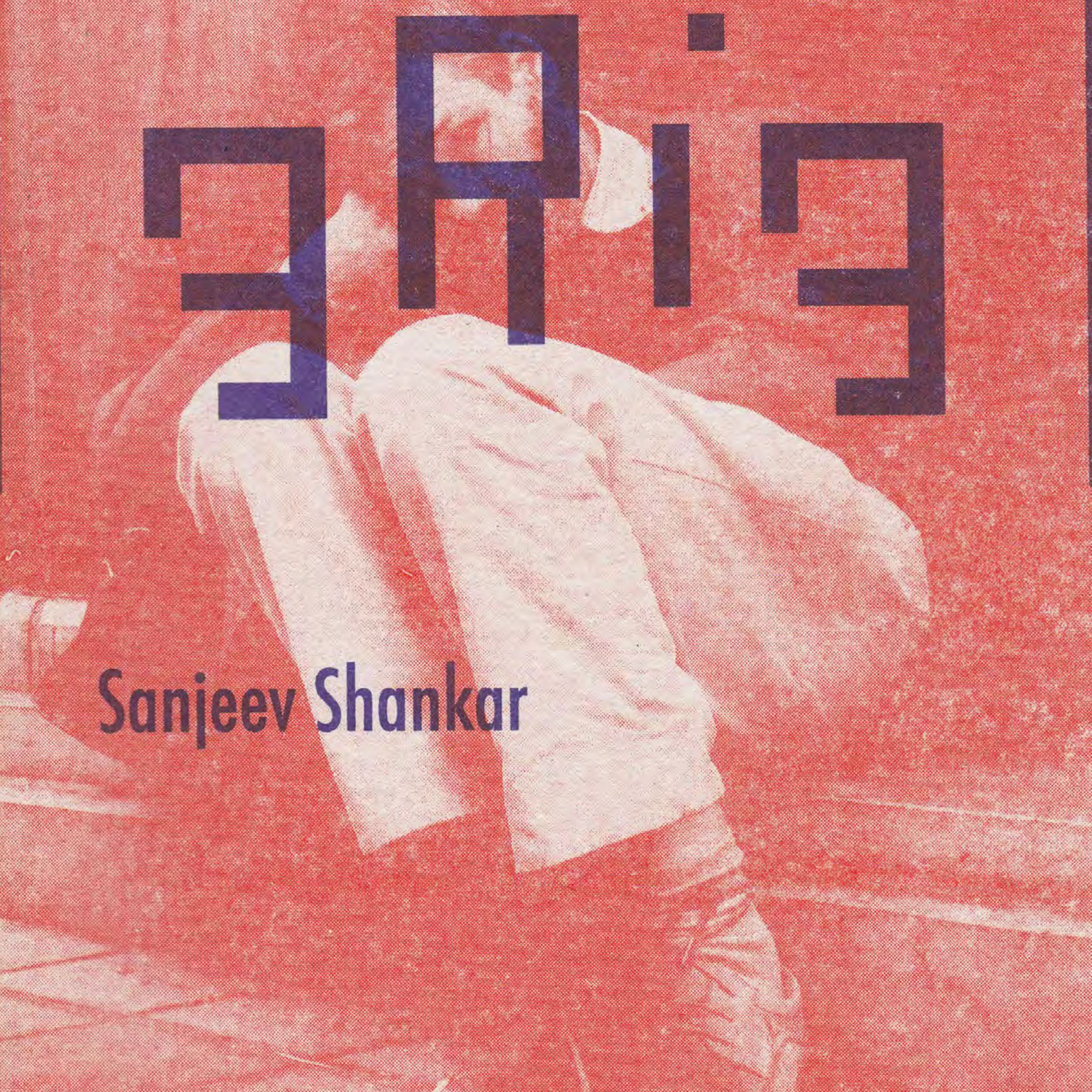
Sanjeev Shankar

RUrban Permaculture

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Towards symbiotic relationships and sustainable futures

Sanjeev Shankar

Introduction

This booklet summarizes the results of a study aimed at providing a comparison between European and Asian perspectives on urban farming and permaculture, with special focus on Belgium and India. The study combined site visits, field observations, literature surveys and semi-structured interviews with inhabitants in urban and rural parts of these regions. The process through this journey demonstrated the complexity of the problem, and the diversity of techniques required to bring about effective change. It also brought out the importance of the cultural context in (1) providing realistic solutions for collective action, and (2) understanding ways in which local situations influence strategies for a sustainable future. What began as an inquiry into ways in which we can transform our cities into green visions and develop purposeful links with ecology, led to reflecting on different aspects of human interaction, self regulation and the need to promote ingenious action. The journey highlighted the importance of local solutions and self reliance; of ethics, awareness and accountability; of long term responsible action and conservation. Travelling through rural and urban spaces underlined the need to integrate traditional values with new technologies. It also brought out the importance of collaborations and symbiosis as a necessary ingredient for meaningful interactions. In a world which is becoming increasingly interconnected, we've finally reached a point where being "green" or sustainable is not a choice, but a necessity for everyone.

1. Business as usual is not an option

"If radical changes are not made to how we produce and distribute our food, the world's people cannot be fed over the next half-century and we will be left with a world which nobody wants to inhabit. Business as usual, is not an option." (Robert Watson, director of Assessment of Agricultural Knowledge, Science and Technology for Development, 2008)

The uncontrolled growth of urban centres around the globe has had a critical impact on ecology. Cities have become synonymous with urban sprawl, inflation, pollution, resource shortage and a growing economic disparity. The problem is compounded by commodification of basic essentials, changing food habits, increased consumption patterns, deteriorating soil quality, overt dependence on industrial techniques and a serious disconnect with other life forms. Each year, we lose 20 billion metric tons of topsoil and create two million hectares of new desert. Most nations are staring at a future of resource wars, increasing droughts and imminent food crisis. In addition, the globalization of business has resulted in unseen scales of resource consumption triggered by the competition-growth-speed imperative.[1] We can all do much more to address these issues.

Some of the questions at the core of this study were as follows:
- Is there an ecological limit to economic growth?
- Do we have the right to consider human beings as more valuable than other life forms?
- Is there an option to treating forests as sacrifice zones for urban growth?
- Can we afford to treat nature like an object, which is manipulated, commodified and sold?
- How can we imagine a fertile future for everyone?

The study explored aspects of human environment, its relation to ecology and our attempt for sustainable growth. It explored ways in which we can

transform our cities into productive, healthy, edible and playful green visions.

2. Study in Four Phases

The project consisted of four phases: (1) background research, (2) contextual enquiry, (3) analysis, interpretation, experimentation and feedback and (4) consolidation.

2.1. *Background Research*

This phase included on-line and literature surveys about permaculture, traditional agricultural methods and organic farming. The permaculture design course by Bill Mollison and two books, 'An Agricultural Testament' by Sir Albert Howard and 'Permaculture: Principles and Pathways beyond Sustanability' by David Holmgren were important.

2.2. *Contextual inquiry through site visits and interviews*

The study began with a visit to Brussels and Amsterdam to discuss the project scope and get acquainted with the urban dynamics of these cities. The focus then shifted to New Delhi and through a series of exchanges with the inhabitants, patterns about an urban dweller started emerging. Visits to Chandni Chowk, a dense fifteenth century settlement, Centre for Social Development Studies, Tata Energy Research Institute, Centre for Science and Environment, and the Indian Council of Agricultural Research were next. Thereafter, the focus moved to south India with visits to the Gurukula Botanical Sanctuary in Kerala, a forest garden dedicated to conservation and preservation of native plants; Beulah organic farm in Tamil Nadu which specializes in local organic produce; the Rain forest retreat in Karnataka, an eco-lodge located in an organic spice plantation and the Krac-A-Dawna

bio-dynamic farm which is a pioneer in collective grass root action in the state of Karnataka. After returning to Brussels, comparative patterns were explored in Gilbert's eco garden in Moucron, Belgium.

2.3. *Analysis, interpretation, experimentation and feedback*

This study has been informed by insights from Mr. Wolfgang Theuerkauf and Ms. Suprabha Seshan from the Gurukula Botanical Sanctuary; Dr. Sujata and Anurag Goel, founders of the Rain Forest Retreat; and Juli and Vivek Kariappa from the Krac-A-Dawna farm. The research in Europe proceeded through follow up discussions with Maja Kuzmanovic, Evelina Kusaite, Cocky Eek, Theun Karelse, Steven Pickles and Nik Gaffney. The journey concluded at the GroWorld design session in Brussels and thereafter at the Media Ecologies workshop at St. Erme. Practical, hands on experiments were complemented with long term speculative ideas as part of permaculture-kit designs.

2.4. *Consolidation, directives and suggestions*

The study was then condensed into a set of broad directives for future work. These work at multiple levels - from product driven ideas (in the form of permaculture kits), to measures needed for long term cultural shifts necessary for our future. Complete details of the report are available at *http://libarynth.org/research_report_sanjeev-shankar*

3. Permaculture

A permaculture garden strives to become a food-forest, rich in functional plants, grown in groups as co-operative plant companions, or plant guilds. This co-operation between the plants strengthens the long-term self-reliance

of the garden, along with producing high and diverse yields. Originally coined in the mid seventies by two Australians, David Holmgren and Bill Mollison, 'permaculture' or "permanent agriculture", has gone beyond looking at strategies to create sustainable food growing methods to become a worldwide movement encompassing different aspects of human life in harmony with the Earth and its finite resources. It is an integrated, evolving, multidimensional and creative design response to a world of declining energy and resource availability, with emphasis on design processes drawn from nature. Through an experiential learning process, it cultivates a desire to solve problems, to experiment and to design. While permaculture offers us a graceful and ethical dimension, the following principles make it universally applicable. How one interprets and implements these is open for questioning, refinement and improvisation:

- Observe and interact, by treating the landscape as a textbook.
- Catch and store energy in the landscape (e.g. water, soil, trees, seeds, built environment and culture). Energy storage in culture refers to appropriate governance and economy.
- Obtain a yield to create a system of self reliance. This involves organizing control mechanisms and feedback loops that help the system adapt and stabilize.
- Apply discipline, increase self-regulation and accept feedback. This can be done by keeping a constant check on our needs and wants.
- Use and value renewable resources and services.
- Produce no waste and celebrate the concept of recycling.
- Design from patterns to details through constant search for improvement and innovation.
- Integrate rather than segregate.
- Aim for an inclusive approach.
- Value small and slow solutions
- Leave no trace.
- Use and value diversity.

- Use edges and value the marginal
- Creatively use and respond to change

Further, in a situation of economic descent, ethics becomes indispensable. Through its culturally evolved systemic nature, ethics leads us to create a more inclusive view of who and what constitutes "us". The three broad principles which cover ethics of descent are:
- Care for the earth
- Care for the people
- Setting limits to consumption & reproduction, and redistributing surplus [2]

An ancient Indian saying, "Vasudhaiva Kutumbakam" which translates to "The entire creation is one family", is an apt dictum for us.

3.1. *Urban Permaculture*

In urban situations, space is limited and various regulations restrict gardening and/or keeping backyard animals. Some of the concepts that have been used in urban settings range from kitchen gardens, roof top gardens, vertical gardens and guerrilla gardening methods.

4. Lessons Learned

This study has been a constantly evolving journey. The insights and lessons learnt have gone beyond looking at urban farming and ecology. For urban permaculture to succeed, its principles should touch every aspect of our society.

4.1. *To learn, to care, to share and to give*

Simple solutions can originate from any source- independent of age, status, experience or academic background. The issue of education, literacy and awareness is crucial for the success of any venture. Current systems have failed in making a distinction between education and literacy. We are trained to earn money and get a job. Often, the purpose of our life and how we can be of genuine value for our communities is not discussed. The Barefoot College in Rajasthan, India is an important example where villagers are involved in educating the young. Children are able to translate their knowledge into local situations, making the communities much more sustainable. There is no need for them to migrate to cities. Poverty and illiteracy are the greatest challenges facing mankind and such initiatives can inspire us to make a meaningful difference. With special focus on preserving eco-systems, bio-literacy can generate an appropriate response from every stakeholder. It is important to bring out the connection between a fertile soil, healthy crops, healthy animals and healthy humans. Costarica is a good example here. Once we "know" what we are going to "lose", our perspective on things will change and we will take appropriate steps even if it amounts to changing our habits. We will be able to discern and apply our right to choose at every level of decision making.

An important thread through this issue is the politics of information and communication; the question of, who can know what? Technology as an important participatory tool can be extremely effective. 'E-choupals' in rural Indian villages have used technology to increase crop productivity ('choupal' is a hindi term for a village gathering place). Further, since change can happen remarkably quickly in an electronically networked world; there must be sufficient and critical debate over the impact and need for such a change. We must constantly re-evaluate and revalidate our responses and ideas of 'growth' and 'progress'. In cultural contexts, links with tradition should involve the use of past processes of change rather than the maintenance

of past structures and patterns. Having said that, if a pattern needs to disintegrate and be left behind, we must let new systems emerge.

4.2. *Towards long term view: a cultural anchor*

"Jain monks are like grazing cattle; they never take too much from one place or person. They take small amounts and then move onto the next spot."[3]

We need to nurture a moral anchor in every culture, one which challenges convention. It could come from spirituality, religion, an inspiring story, a community or an individual. Here religion is not about belief. It is ethical alchemy, a form of investigation. It is about behaving in a way that changes us and gives us intimations of holiness and sacredness.[4]

The act of growing, gardening and farming in rural and urban areas should be grounded in sustainable moral and ethical principles. Organic farming is an important basic appropriate technology for rural areas, especially in the developing world. From an urban farming perspective, personal kitchen gardens are most effective. If every individual in a city grows a personal garden, the impact can be critical. The future of food would depend on how we interpret, recontextualize and fuse traditional methods with lessons learnt from permaculture.

4.3. *The power and spirit of "we"*

A gradual shift towards a "we" and "us" based culture from a "me" and "I" based approach is required. This is a difficult test for humanity with the diversity of agendas amongst individual humans. Can nations indeed come together and treat certain issues as sacred? Ideas of social capitalism, social entrepreneurship and co-ownership are hopeful signs. How can we systemically integrate the knowledge which continues to remain fragmented in different intellectual disciplines? How can we create an overview?

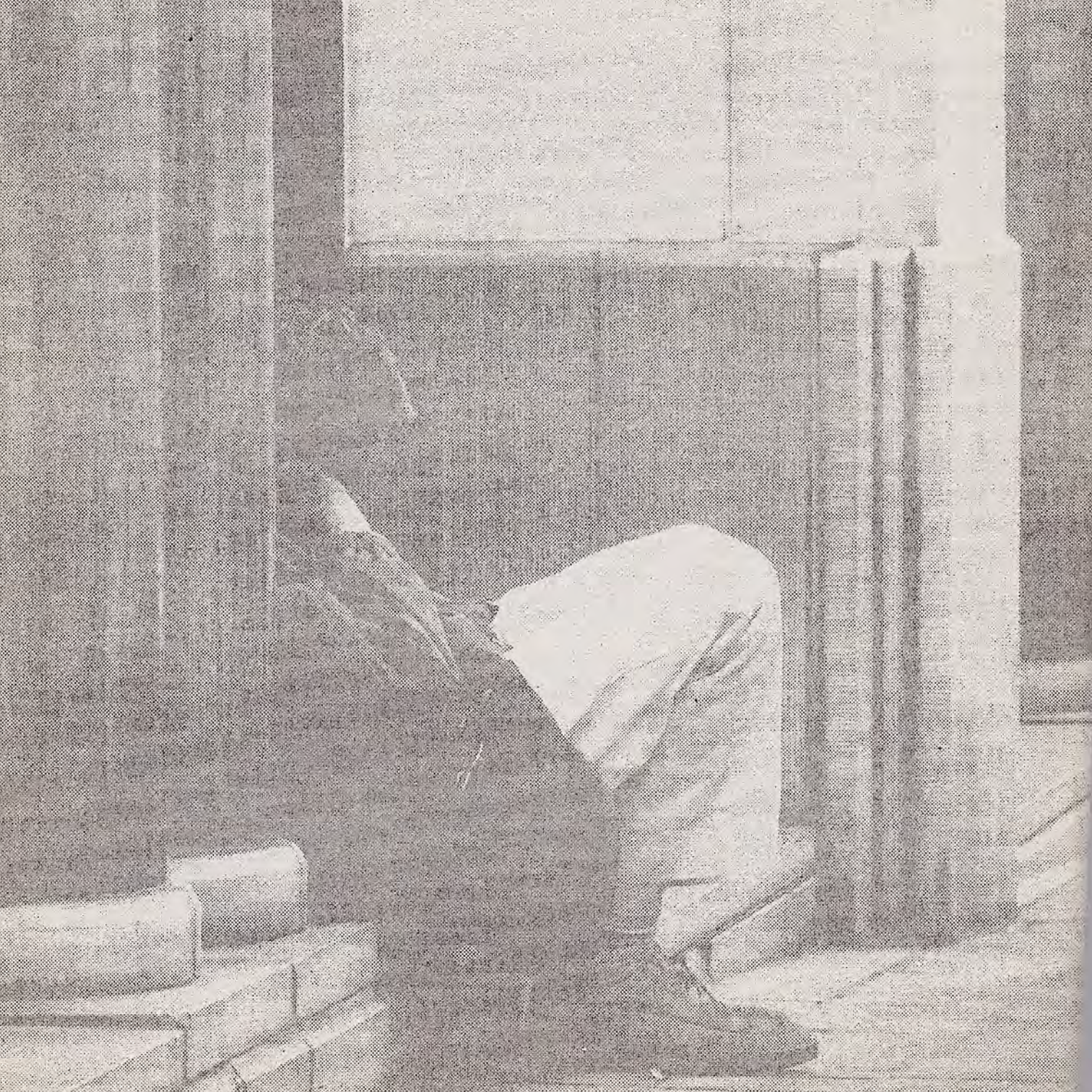
Technology can be a tool but the real answer to this is having a passionate, collective will. There is a definite need for co-operation, dialogue and collaboration between different cultures and contexts to develop a 'greater' self reliant system. Urban communities should join hands with rural areas to create a prosperous countryside, which in turn would support our future. A collective change of mind and heart is needed.

4.4. *Legally sacred*

We all depend on nature's bounty for our survival and prosperity. Translating global agreements on sustainability and biodiversity into legislation and action at the national and regional level is crucial. Land must be safeguarded from the operations of finance. This calls for reforms in the legal system where the rights of other life forms should be safeguarded. We must declare forests and other life forms as life supporting systems- a green insurance. A gradual and determined approach for recovering the land and celebrating the farmer is needed and the benefits of this shared with everyone. When people develop pride in their work, they feel accountable and responsible, and this results in purposeful change. This is an important aspect for community driven bottom up change.

4.5. *Towards purposeful collective action*

We all have a construct, a conscious grammar about ourselves and the world around us. The idea of language is central to this. We need words, numbers, and definitions; but, they are not the end. They are tools for feedback, for self regulation, for differentiation and for efficient distribution of resources. In our competitive urge for 'growth' reflected by larger numbers and ever changing definitions, we could lose the purpose of collective, purposeful action. An example to illustrate this is the growing divide between "urban" and "rural". Migration from rural to urban areas has been a global phenomenon for centuries. People in most parts of the world crave to be



in an urban setting. It gives them a sense of pride and achievement apart from other tangible benefits. This contributes to continued unsustainable migration from villages to cities. There is a need to redefine the mental and physical construct of an 'urban' space and a 'rural' place and treat them as a unified whole. During interviews with inhabitants in Delhi, it was felt that most dwellers still treat the city as their work place where they have "located" themselves. Their "home" is in the countryside. This social phenomena of "locating" oneself in a place rather than celebrating it as home, is an important issue and needs to be addressed.

4.6. *Towards diverse, self organized, self reliant homes*

Diversity contributes to growth, resilience and evolution of a system. We need conditions that make independent ingenious ideas possible. In India, hopeful signs of grass root organizations which have successfully created local cycles of mutual cooperation in a self organized way have emerged. [5] These have actively disjoined their workplace from global competition and lived in harmony with nature. The Development Alternatives Group in Delhi, Barefoot College in Rajasthan and the Gurukula Botanical Sanctuary in Kerala are few inspiring examples. These initiatives have transformed villages into alternative models of sustainability displaying a strong sense of intelligence, humility and moral integrity. Through a community driven, hands-on approach, people have found a quiet solution to their future. Be it the children's parliament in Barefoot College or rural woman who work as plant taxonomy experts in Gurukula Botanical Sanctuary, these places radiate with respect, joy and confidence. They feel warm, familiar, inclusive and inviting to everyone. Above all they feel alive, they feel like home. Through their work and character these people have added exceptional value to the place. The results have been slow but the impact is deep and unquestionable.

5. Design probe: Greening the cities using Green Brick

The study resulted in a proposal for the design of a green, intelligent, modular and structural 'brick' which has specific native plants or seeds integrated with it. The 'plant tile or skin' would act like a "living brick" that could be integrated with the built form, thereby triggering diverse greens within a city. This would gradually transform the city's infrastructure into a productive, healthy, edible and playful fabric. Few crucial questions driving the design exercise are: how can we learn from nature to design more resilient and responsive systems? How can we effectively use technology to reconnect humans and ecology? How can we embed this 'brick' with living technologies to perform certain functions? Could every 'tile' be treated like an insulated green house which accumulates solar energy? How can we create pulsating, hygienic, life giving 'skins' around us and improve our environment? Could the constituent material for the brick act like a nutrient? How would such a close and continuous spatial association with plants affect our outlook? Would it create a paradigm shift in our relationship? The thrust of this proposal is to use technology and advances in material science to explore the relation between architecture, ecology and computation by redefining our understanding of the quintessential building block: the brick.

5.1. *Plants and cities*

The growth of urban centres around the globe has had a critical impact on plant-ecology. In recent years there has been a growing interest and public movement to bring ecology out of the bush and into the urban and suburban environments. As per recent statistics, 73 million humans are born every year. Can we trigger birth of 73 million plants?

Growth of cities is inevitable, especially in developing countries. The momentum is such that while asking people to slow down, we must also find

ways in which we can contribute to this growth in a responsible and efficient way. An effective green shift can happen at the market level through new product solutions. By 'integrating' plants with the city's infrastructure we can create an enormous positive impact and shift the way architecture is perceived.

5.2. *Growth*

Infrastructure would classify as a key "growth" symbol within a city. The intent of this proposal is to create a green threshold through the design and practical use of green "bricks", thereby creating ubiquitous green clusters within a city. The vision goes beyond manicured lawns, horticultural imports, bonsai's and golf parks. The proposal strives to bring back native plants at the core of our daily life by integrating them with the built form and other symbols of 'growth' within a city.

People could buy the 'green brick' off the shelf and use it as a substitute for conventional bricks or concrete blocks. This could be integrated with curtain walls, acoustic panels or glass blocks and become an integral part of the building structure. Over time, cities would be associated with the plants they give life to. Barren walls, commonly seen in cities today, would turn into fertile green communities. The choice of plants could be adapted to address pressing challenges within a city:

- The bricks could become a source of nutrition, vitamins and herbal medicine (e.g. Leucus aspera cures bronchitis and asthma, Lia Indica cures ulcers, amaranthus is used by dentists). Each home could become a seed bank, a space for abundant biological exploration and a living, evolving bio-archive.

- The integral plants could predate on pests and act as repellents for

termites (e.g. Lantana)
- Plants could create a green cushion to act as an acoustic buffer, apart from generating fragrance to counter foul smells (e.g. Epiphyllum oxypetalum, commonly known as 'queen of the night')
- Plants could act as green filters creating healthy micro climates in polluted urban realms

Reducing the urban heat island effect with these bricks is another possibility. Numerous other benefits could result from such integration. The specific choice of these plants would create new urban identities. The process could strive to fuse local variables with global aspects of construction and need for structural performance. Local nurseries and gardeners could play a crucial role along with input from established botanical resources. The final product solution could draw from the intrinsic qualities of natural structures and result in a series of systemic solutions suitable for different regions and climates. This would be an opportunity to explore and possibly redefine the idea of the building block.

5.3. *A green hope*

The Green Brick promises an integral, symbiotic and technology driven design vision that could create a practical design for the future city. Future investigation would involve interdisciplinary research and development, drawing from the fields of biomimetics, smart materials and evolving responsive environments, under the larger purview of architecture, computation and ecology. There are numerous threads worth exploring. For example: Would this integral approach be visible and tangible to the naked eye? What would be the most efficient and appropriate form and material? Could we reuse industrial waste as the material or create an organic composite which supplies nutrients to the plant? Can we fuse fabrics and metals using shape deposition manufacturing (SDM) technique

to create a material which is both structure and facade? Would the surface texture collect water from early morning fog, using a structure similar to the hydrophilic bumps on the tenebrionid desert beetles in Namib desert, or would it be inspired by the directional corrugations on shark skin or an abalone shell? Would it evolve to allow the plants to develop an internal self-regulation method? Would this become a precise craft or still offer the uncertainties of living forms? How would it incorporate the growth of roots and branches? How can we design and build a platform for 'growth'? How can it be based on an inclusive, symbiotic model? With the knowledge that diversity and resilience has been crucial for human evolution, would this process lead to a more synthesized urban community? Will it lead to a new language of design hybrids which balance static elements within a dynamic composition? Would these skins become crucial ingredients of built forms which grow and transform? Could this change the way architecture is perceived? Could the constantly evolving emergent space contribute to a new language for spatial semantics?

These threads indicate the need for a collaborative effort to translate this proposal into a practical building solution which could redefine the way humans live and perceive space.

6. Acknowledgements

I would like to end this chapter with a note of gratitude for every living entity which has made this journey meaningful. We stand united in our respect for life, for beauty and for the spirit of living.

References

Thompson, D. (2000). On Growth and Form. Cambridge, United Kingdom. Press Syndicate Of The University Of Cambridge.
Wigginton,M., Harris,J. (2002). Intelligent Skins. Woburn, MA. Reed Educational and Professional Publishing Ltd.
Holmgren, D. (2002). Permaculture - Principles and Pathways Beyond Sustainability. Australia: Holmgren Design Services.
Haeckel, E. (2005). Art Forms from the Ocean. Munich, Berlin, London, New York. Prestel.
Howard, A. (1940). An Agriculture Testament. Oxford University Press.
Mueller, T. (April, 2008). Biomimetics - design by nature. New York. National Georgaphic Publishing Group.
Ferre, A., Hwang, I., Sakamoto,T., Tetas,A., Kubo,M., & Prat,R. Verb Natures: Architectural Boogazine. Actar's Boogazine.

Glossary

1. Permaculture: Permaculture is a holistic design response to a world of declining energy and resource availability with emphasis on design processes drawn from nature. Through an integrated, interdependent, evolving, multidimensional and creative approach, it manifests itself as a system of gardening; as a worldwide network of individuals and groups, and as a sustainable culture.

2. Heat Island Effect: The term "heat island" refers to urban air and surface temperatures that are higher than nearby rural areas. Heat islands form as cities replace natural land cover with pavement, buildings, and other infrastructure. The effect is further increased in areas with tall buildings and narrow streets

3. Seed Balling: A simple and effective method for re-vegetation of degraded landscapes, particularly in semi arid areas using seed balls

Links

http://libarynth.org/research_report_sanjeev-shankar
http://libarynth.org/urban_permaculture_kits

Notes

[1] From Liberating Voices! A Pattern Language for Communication Revolution
[2] From Permaculture-Principles and Pathways Beyond Sustainability by David Holmgren
[3] Transcript from a conversation with a priest in a temple in Delhi, India
[4] Karen Armstrong-author of The History of Myth
[5] From Liberating Voices! A Pattern Language for Communication Revolution

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EDUCATION

2009 Masters in Science, Emerging Technologies and Design, Architectural Association, London, UK
2006 Masters in Industrial Design, Industrial Design Centre, IIT Bombay, India
2004 Bachelors in Architecture, School of Planning and Architecture, New Delhi, India

AWARDS AND HONORS

2009 Emerging architecture awards, Architectural Review, RIBA, UK
2009 Winner, British Chevening fellowship, India
2009 Winner, Lockyer District High School Public Art commission, Australia
2008 Winner, Paul Foundation grant, India
2008 Part of a winning team for a school redevelopment project in Toronto, Canada
2007 Part of a winning team for a pedestrian bridge project near New York, US
2006 Recipient of DAAD fellowship from Germany
2006 Recipient of Teaching Assistantship from IIT Bombay for two years
2006 Indian entry for RED DOT product design concept award, Singapore
2006 Finalist for International Young Design Entrepreneur of the year award by British Council, India
2004 Gold Medal recipient for Architecture
1999 Selected to design tensile structures for India International Trade Fair, Delhi, India
1999 Recipient of Merit cum Means fellowship for five years from School of Planning and Architecture, India
1998 Recipient of Indian Air Force fellowship for two years, India

WORK EXPERIENCE

2009 Permanent public art installation at Lockyer District High School, Australia
2009 Design direction and creation of training videos for hand crafted leather footwear, India
2009 Product development with Manish Arora, Paris Fashion Week
2008 Public eco art installation project, 48°C, India
2008 Design researcher at FoAM, Belgium
2007 Design Consultant at FoAM, Singapore
2007 Collaborated and assisted Catherine Widgery in public art projects in USA, Canada and India
2006 Creative designer with Landor for Armani hotel and Burj Dubai projects in UAE
2006 Conceptual designer for 'Bauma 2007'in collaboration with 'Architopia', Germany
2006 Collaborative work at Technical University Munich to create an interactive social platform for Europe
2005 Product designer at 'Toehold' to develop culture specific shoes in India
2005 Product designer at 'Cane Concepts' for designing bamboo and rattan products in India
2003 Junior Architect for Dubai Autodrome with HOK-SVE architecture firm in UAE
2002 Junior Architect for Design Combine architecture firm in India
2001 Junior Architect for Inside-Out interior design firm in India

CONFERENCES

2008 Paper presented on 'Water Stories from Resurgent India' at Water Symposium, IPPO, Germany
2008 Paper on 'Ubiquitous planting and Green Bricks' submitted for Acadia : Skin + Silicon, USA
2008 Paper presented on 'Design from the Orient' at Pecha Kucha design night, Belgium
2008 Paper on 'Soliloquy- Visit to a Rain Forest' submitted for Luminous Green publication, FoAM, Belgium
2008 Paper on 'Where is my Chai?'.submitted for Luminous Green publication, FoAM, Belgium
2007 Paper presented on 'Craft Nouveau' at FoAM, Belgium
2007 Paper presented on 'Barefoot College' at 'Luminous Green' in FoAM, Brussels with Maja Kuzmanovic
2007 Paper presented on 'Uduppi-Traditional Food System in India' at DOORS design conference, India

2006 Paper presented on 'Cultural Influences in the Creative Process' at Smart Lab, Ecole'd Architecture, Paris
2006 Paper presented on 'Intercultural Knowledge Exchange' at Transcultura in Goa, India
2006 Installation proposal for Lille Festival, France
2005 Paper presented on 'Indian Informal Sector' at DOORS design conference, India
2004 Paper presented on 'Rethinking Modernism' at annual architecture seminar, India
2003 Paper presented on 'Demystifying Cyberspace' as part of architectural dissertation, India

PRESS

2009 Architectural Review, UK
2009 Architecture + Design, India
2009 Icon, UK
2009 Azure, Canada
2009 Architectural Record, US
2009 Hinge, Hong Kong
2009 Platform, India
2009 Make, US

BOOK

2009 'Limited Language: rewriting design: responding to a feedback culture' by Colin Davies and Monika Parrinder published by Birkhäuser Verlag

EXHIBITIONS

2008 48 degrees, Public.eco.art festival, India
2008 Silent Rivers, Belgium
2007 Art for Prabhat, India

Although the "guild for Reality integrators and generators" may have been active for centuries, since November 2006 six cultural organisations have begun to open the doors of the guild. The current gRig members share a mutual purpose; to mix separate realities, as well as bring whole new realities into existence. They are committed to research and create situations in hybrid (or mixed) reality, where digital media and physical materials, objects and spaces are increasingly intertwined. It is on these fuzzy edges that experimental technology and contemporary culture amplify each other's potentials. We have found these edges to be the most fertile ground for innovative social and cultural advances, in which the Guild for Reality Integrators and Generators can be best called into service.
gRig sites 2006-2009

FoAM (Belgium) is a transdisciplinary laboratory committed openness, resilience and a holistic approach to life. FoAM seeks out and connects people in the interstitial spaces between professional and cultural boundaries, encouraging them to mix realities of art and science, digital and physical, nature and technology, adopting the motto - "grow your own worlds". *http://fo.am.be*

nadine (Belgium) is an arts laboratory aimed at developing research focusing on transdisciplinary experiments in the fields of new media and live arts. *nadine* is a flexible and evolving project that doesn't shy away from questioning itself to be able to stay on top of the constantly changing needs of artists. *http://www.nadine.be*

Time's Up (Austria) is a research institute using experimental situations as a means of investigating the behavior of the public individual in everyday and nearly everyday situations. *http://www.timesup.org*

Performing Pictures (Sweden) works in the area of moving images and new technologies for media delivery as part of the Interactive Institute – a Swedish experimental IT-research institute that combines expertise in art, design and information technology. In their artistic practice Performing Pictures explore and develop responsive film art. *http://performingpictures.se*

KIBLA (Slovenia), a multimedia artcentre, is focused on the new (contemporary) educational, cultural and artistic praxis, connecting education and research, culture and technology, arts and sciences, emancipating and demystifying media as a creative tool in education and new forms of art. *http://kibla.si*

InterMedia (Norway) investigates the intersections between design, communication and learning in digital environments. Their approach is multidisciplinary and involves critical research, development and experiments. *http://intermedia.uio.no*

Culture 2000

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