

**Resource Architecture – XXI World Congress of Architecture
22 to 26 July 2002 in Berlin**

Forum 5 Centre and Periphery – Balanced City

Name Prof. Newton Harrison

WORKING AT THREE SCALES

By Newton Harrison and Helen Mayer Harrison – The Harrison Studio

This presentation will consider planning at three scales – city scale, regional scale, and sub-continental scale. I should explain that over thirty years ago we, Helen Mayer Harrison and I, as an artist team, took the decision to do no work that did not variously comment on, support, restore and value the ecosystem in which the place we found ourselves invited to work was embedded. Thus we found our way into the domain of ecologically based planning through the lens of the artist's eye. We hold that every place is telling the story of its own becoming, creating and destroying its own history moment by moment. We also hold that the artist is, in as many, although different, ways than the writer, the storyteller of the culture. And, of course, no story can function as a story without embodying existing metaphors and out of this process of creation, new metaphors emerge. The narrative properties of our work take a variety of forms, models, diverse visual images, and diverse linguistic approaches. The outcomes tend to be installations that propose new elements designed to first create new space for the mind and thereafter engage the built history of place.

FRANKFURT: THE CITYWIDE SCALE

When Rolf Toyka, Director of Education for the Chamber of Architects of Hesse, and Manuel Cuadra, Chairman of our Committee, invited us to be part of a workshop that would make proposals for the city of Frankfurt, we posed to ourselves the same questions we always do:

1. How big is here?
2. What are the boundary conditions of here?
3. What are the social and economic conditions that operate?
4. What is the state of ecological wellbeing of this place?
5. What is endangered here? And if so, how?
6. Are there new patterns emerging? And if so, what are they?
7. Can we perceive other patterns that might possibly emerge?

At this point, based upon our past experience, intuition, and research, as well as the information that flows to us from the direct experience of place, we search for what appears important to say and how may we add value to the story of the becoming of this place.

In Frankfurt, we soon grasped the fiscal difficulties of the city: based on

5. a reduction of its tax base due to the exodus of the wealthy
6. a rather large debt to the banks as a result of developing the cultural infrastructure
7. an unduly large administrative structure
8. the amount of monies variously required by unemployment and
9. a general reduction of funds that came of the flow of monies to the east.

The major remedies for this state of affairs put forward by internal planners represented two opposing views. The first was for the city to expand, to annex some of the encircling towns that were attracting Frankfurt's population and thereby to keep its tax base. The other was to not expand but to grow up ward and to improve quality within. We chose the latter as the better possibility. The former was fraught with difficulties that we enlarged upon in our Frankfurt proposal, which has been reproduced for those present at this conference.

The concept that we developed is based on valuing the farms within and bordering the city, of which there are many, as well as the forests, the meadows, and the rivers. Frankfurt is blessed with a rich potentially biodiverse surround and the City of Frankfurt could profit by acting as a figure within this potentially valuable field. The headlines for the proposals are as follows:

**ON VALUING THE FARMS,
THE FORESTS, THE RIVERS,
THE MEADOWS
AND THE CITY OF FRANKFURT
WITHIN ITS OWN BORDERS:
THE GREAT ENCIRCLING WALK**

**ON AN ATTENUATED BOTANICAL GARDEN
THAT ADDRESSES THE FUTURE OF FARM LIFE
AND BOTANICAL LIFE
FOR THE CITY OF FRANKFURT**

**ON FARMING IN THE CITY OF FRANKFURT:
ON THE PRODUCTION OF CERTAIN FOODS FOR ITSELF
WITHIN ITS OWN BORDERS**

ON A NEW RIVER FOR FRANKFURT

MORE ON THE GREAT CIRCLING WALK

Fundamentally, the concepts that flow from these headlines are as follows:

A botanical boundary running through the farmlands which are so apparent along one edge of Frankfurt,

The farms themselves valued differently, and green farming subsidized by the recycling of the waste of the city, enhancing the topsoil.

The forested lands encouraged to go into succession.

The center of the city grows upward and the neighborhood is refurbished and valued.

Finally, a new edge is created by the construction of a stream dropping from the Main at the upper border, swinging through the forest, and coming back into the river at Frankfurt's lower border.

The waters themselves are purified and space is located for some high-end development at the new river edge.

If the concept were accepted, Frankfurt would become a figure with in a diverse field, partly ecologically driven, part botanically driven, part farm – in fact, a new eco-urban edge would be created to form a diverse boundary for the city. An amenity, an adventure, a limitation that would encourage the creation of value within its borders!

We believe that every city will in due course need to grasp and make a virtue of its own boundary conditions. If we are thinking about the increase of population, and the concentration of population, if we are thinking about boundary conditions for cities, particularly those advantaged by existing within larger farm and forest domains, then we need, we believe, to address these boundary conditions and limitations so that the boundary conditions themselves feeds value back into the communities within them.

THE REGIONAL SCALE: HOLLAND

The second scale is regional in nature, the approximately 3,500 square kilometers of the Green Heart of Holland in relationship to the Randstad. The Harrison Studio, at the request of the Cultural Council of South Holland, undertook a consideration of the Green Heart. Beginning with an appreciation of the appropriateness of the metaphor embedded in the naming "Green Heart"; they searched for its meaning and its identity. The Green Heart can be seen as a vast farm centering a ring of cities - Rotterdam, Den Haag, Amsterdam, Utrecht, et al. Its landforms represent the history of Holland. It is a landmark by which the rest of the world recognizes Holland. It can be seen as a great Central Park for this ensemble of cities, the Randstad, which in turn are an economic and cultural center in Europe. But the Green Heart was facing encroachment from without and development from within. Its value at that time was being debated, its identity

questioned, its very existence threatened. It was being threatened by the belief that 6 million plus houses, or a \$150 billion economic engine was the inevitable use for these lands. The question was, could we redirect this force by a simple, clear and convincing vision?

In responding to this, the Studio constructed a series of images – part ceramic tile, part map, part drawing, part video and part text that propose a new vision for the Green Heart and the Randsd. And then possible new boundary conditions would clarify the roles of the urban, the ecological and the farming communities. These altogether comprise a major part of the Dutch landscape.

The Green Heart Vision is a single form that encodes a complex array of functions, processes and concerns. The form itself is a ring around the Green Heart, approximately 140 kilometers long and one to two kilometers wide, that we call the Ring of Biodiversity. The inside edge facing farm and polder, the outside edge seen as the eco-urban edge, posits that a new form of design is needed where the urban interfaces with the reconstructed ecology. Modeled on Nieuwkoopse Plassen and de Kerkweg along the Meijewijk their spontaneous succession ecologies, the ring offers the possibility of presenting the full range of bio-diversity available to the polder landscape.

The outreach arms of the Bio-diversity Ring take up the issue of maintaining cultural diversity and minimizing urban sprawl by separating the major cities of the Randsd. Every outreach arm can be seen as a many kilometer linear park, varying between one and two kilometers in width. Every outreach arm terminates in an ecologically vital area – forests, hills, and dunes, the IJsselmeer, et al. Every outreach arm prevents two major urban forms from joining and forming the alienated space that results when large cities overbuild their perimeters. Every outreach arm would be designed as multiple use park space, with housing at the perimeter whenever possible.

The outreach arms as a whole define sufficient space outside of the new Green Heart border for the presently planned for 600,000 houses and infrastructure. The Harrison Studio, however, suggested that without clear limits to grow that the Randsd community as a whole would suffer cultural and environmental stress in the near term coupled with economic stress in the long term.

Both the Green Heart and the Randsd are expressed imagistically and poetically as one place, a reciprocating figure-ground relationship, a yin-yang totality. In contradistinction to normal mapping operations, the biodiversity argument and the cultural and economic arguments are wedded to structure

here. We have been told specifically that the principles of this argument have been accepted and are in the plan. That is to say, the region is now being planned as a whole rather than in fragments. Cities are being kept separate by park land, the Green Heart will not be developed. However, the Biodiversity Ring, the most original of our ideas, will probably not be done.

THE SUB-CONTINENTAL SCALE: "PENINSULA EUROPE"

In 1998, we were invited by the Schweisfurth-Stiftung to write one of the ten books produced by Hannover 2000 on the future of the European Landscape. To define the terrain, we looked at a map of the Eurasian Continent with the European Peninsula jutting out into the Ocean. We took our pencils and we emphasized the rivers, defined the mountain ranges and whited out the roads and a surprising image emerged. It appears that the Vistula drops off the Carpathians flowing north and ends in the Baltic Sea. The Dnestr drops off from the Carpathians flowing south and lands in the Black Sea. In the Carpathians, the beginnings of these rivers, their first tributaries, are only about 30 kilometers apart. Where these rivers hit the vast Russian plain, a large wetland edges them. Thus the European Peninsula has an almost complete water boundary, an astonishing geographical revelation, as this means that the European peninsula is connected to the Russian plain by only 30 kilometers.

Seeing

The geographical heartland of Europe
 As a peninsula
 Extending from the continent of Eurasia
 With ocean boundaries
 Cojoined by the Dnestr and Vistula Rivers
 Separating it from the Russian plain
 Making it almost an island

Peninsula Europe
 Contemplating its domain
 The high grounds emerge
 As both pattern and icon

Thinking

Contemplating the pattern
 Reflecting on the properties of its
 domain
 I said,
 "It's an array of drain basins cradled by the mountains
 formed by the pouring forth of the rivers
 that begin in the high grounds."

You said,
 "Most of Europe's water begins there.
 I said,
 "If the forests were left to re-grow
 and the grasslands released from overgrazing
 Then the resulting bio-mass
 Could help to purify
 The outpouring of water."
 And you said,
 "Then the bio-diversity ribbons again could grow
 across the high grounds from the Pyrenees
 to the Carpathians
 I asked,
 "Where would you begin?"
 and you said,
 "Where the terrain permits and the will exists
 Choose your mountain."

The Schweisfurth-Stiftung called a small conference on the concept of Peninsula Europe to test its viability to see if it made sense to seek funding from the European Union and the Deutsche Stiftung Umwelt and diverse museums to develop and present the concept "Peninsula Europe – The High Ground". This meeting was attended by a diverse group of people. Several ecologists with a particular focus on transmontaine systems, an economist, a high level bureaucrat from the European Union involved in environmental protection, a person from an independent environmental organization from Hamburg whose focus was on environmental economics and generating systems of production that tuned to natural systems.

With the usual maps on the wall we made the following presentation. We said that we saw Peninsula Europe: the High Ground as a trans-European eco-cultural form at great scale wanting to happen. The trans-European bio-diversity ribbons could re-establish the biomass and redundancy necessary for the well being of large ecosystems, such as existed formerly, but are no longer part of the current cultural landscape. We believe this new forest/meadow system has the potential of protecting the top end of every river within its domain. Therefore, most of the countries of Europe would gain a pure water downhill flow of great magnitude when the water crisis across Europe will begin to become acute in the next fifty or sixty years, perhaps sooner. All agreed but the EU representative. He stopped us here, asking where the money would come from and how would EU interests be served and how would such a system be sustained over time?

You said, "Think of the waters. About 1430 billion cubic meters of water fall on the high ground. At least a thousand billion flow downhill. The rest remains in the mountains because of percolation and evapo-transpiration. So we are looking at about a thousand billion cubic meters of water yearly."

Then I said, "Everybody pays at least on average one Euro and some times two or three times that downstream for clean water. So we are looking at a trans-peninsula expense pattern of perhaps 1 trillion Euro yearly assuming all downhill flow is used at least once. As the gross transnational product appears to be about 8 trillion Euro, a rough calculation suggests that a modest water tax of about 1/2 percent would yield about 50 billion Euro a year. Projecting this over a 15 year period that amount of money would go a long way to putting this system in place. Once in place the system would move to self-maintenance and therefore costs would drop significantly

Thereafter the gentleman from the EU said, "Go for an EU grant."

Operating in scales of the dimension of "Peninsula Europe" is normal for our highway systems. Almost normal for our military systems such as NATO. Certainly normal in our monetary systems, thinking about the euro. And obviously normal if we look at "globalization". "Peninsula Europe" operates in that context. However, we see planning imperative on the 50- to 100-year scale. It takes the following shape. The high grounds of Europe take up almost 40% of the land mass, but the population of the high grounds is only 40 million. The lower lands, which are about 60% of the land mass, have a population of about 280 million. Now when the greenhouse effect raises temperature levels, the tree line will rise, farming will change its nature, some flooding will take place in the low lands, while population increases. We predict that the high grounds will perhaps double their population. Who will conceive the new cities and towns and future eco-urban edges in ways that protect the high ground, the cultural landscapes and ecosystems, but those who share the disciplines of people in this conference?
