

Interstitial Layers

Interstitial layers is a programme of urban analysis set up for semester one of the third year at the Centre for Architecture, John Moores University. It forms part of a two step pattern, now established in Liverpool, of using a Semester of analytical and creative urban design in order to build a platform of knowledge and experience as a context from which individual 'comprehensive building designs' could be launched. The specific aim of the first semester programme was to create a means whereby existing cities (using Liverpool as the laboratory) could be interpreted as a set of information patterns which would accurately represent the facilities of the city. The holistic set of these information patterns as an artifice could then be utilised as a context primer for exploring and assessing future scenarios of development for the cities. (Pages 1-4 deal with the process page 5 holds two fly through examples of the computer phase of the programme)

The approach was driven by the idea that pattern recognition and pattern creation are inherent to our comprehension and manipulation of the environment we inhabit. Pattern recognition is taken as the ability to group individual entities and events of empirical data under abstracted themes thus forming categories and philosophies of association. These groupings are capricious due to the dynamic nature of the environment and the specifics of the environmental application upon which we test and reciprocally assess and amend the themes and philosophies of association. This ability to abstract has enabled us to project and intervene successfully in the environmental patterns to our benefit. There is however a world of difference between the reciprocal pattern language resulting from 'inhabiting the landscape' and 'inhabitation as landscape'. The complexities of nature prevail in 'inhabiting the landscape', whilst in 'inhabitation as landscape', the complexities of 'our own nature' prevail. Today's cities are artifices; reflective of our actions and social strategies, but they do not evolve relatively to the dynamics of our own nature. Past patterns, in their majority retain an influence on our nature, whilst natural patterns are generative and their constituents recyclable. Our patterns fail to evolve and are deserted rather than recycled. They become patterns in the dust.

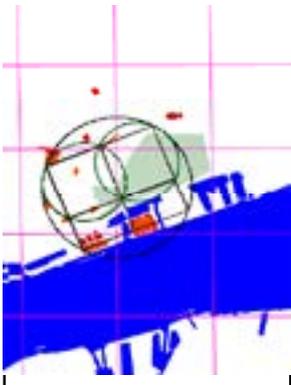
The premise for the project was that existing cities already contain innumerable diverse and complex patterns from the past, some of which restrain the city's re-facilitation whilst others are essential as existential footholds (they constitute the image of the city and hence give us identity, context and meaning). This sets up a conflict between the city matrix as facility and identity which can also be viewed as a relationship between transient facilities and more permanent image as meaning or spirituality. In redesigning our cities we need a methodology of approach that reveals these city patterns, accepting the prevalence of the past, and growing in a way that re-facilitates and reinterprets our cities advantageously with patterns that offer both appropriate facility and spirituality. In effect a method that enables us to comprehend the complexity of existing patterns and then to successfully project and intervene in the environment for our future



1. Accumulated image of Liverpool based on Kevin Lynch's definitions of a city.



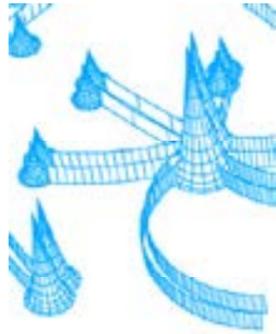
2. Discovering order within the existing city image, based on the location of existing nodes.



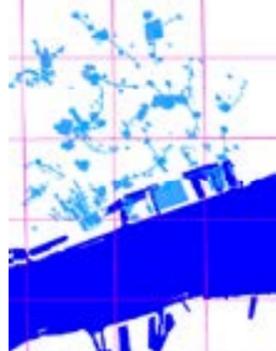
3. Extending the order into the interstitial layer as a nodal skeleton around which new identifiable fabric can generate.



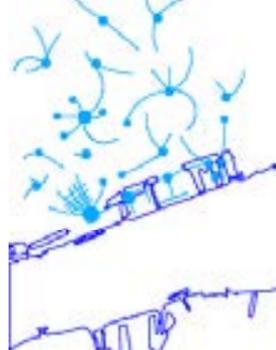
4. The new geometric order in the context of the identifiable fabric and the interstitial layer.



5. Services, representative megalope behaviour pattern. Areas developed as nodes feeding the areas they service.



6. Block patterning of the distribution of existing services throughout the city centre of Liverpool



7. Two dimensional plan of existing services as mega-lope behaviour pattern.



8. Three dimensional megalope behaviour plan as projected pregnancy for the future city according to manifesto.

benefit. Inhabited landscape somehow needs a means of starting from simplicity and building into the most complex of systems. A series of base blocks that formulate patterns which are contextually evolutionary where the context as an evolutionary dynamic in itself is the sum of 'our own nature' within nature.

This means that the existing language of the city needs to be extrapolated, its complexity made comprehensibly and manipulable. Computers are useful tools when processing complex information, storing and variably displaying large amounts of information at one point in time. The city as an artifice can be interpreted and categorised into a series of information layers. Consequently the complex interrelationships between representative patterns of information, constituting the (city as an artifice) can become more apparent within the computer through the analysis of the various permutations of layers. In this way the facility of the computer space becomes the means 'to see' and actively participate in the city as a complex set of interrelated patterns which would otherwise be too large and complex to grasp. Machine space also enables the city's pregnant patterns to grow as a set of variably evolutionary dynamic scenarios where the outcome of overlaying, inserting and amending of any combination of pattern layers can be assessed in association with all the other pattern layers, testing and reciprocally assessing potential future city scenarios. There is of course the problem of unwritten space and the interpretive transfer of the artifice into the machine. How much initiation (that effectively forms a limitation) is it necessary to create such that others can participate whilst retaining creative freedom? What complexity of interpreted information as categories is acceptable such that the combined permutations can be manipulated whilst still being comprehensible as a representation of the actual city?

The project initiation came from the conflict itself, the city patterns being segregated into two distinct forms of information consisting of facility (mutable) and image (immutable). Immutability as existential foothold was categorised through references back to a set of observer - memory interpretive classifications that distinguish the city matrix such as those of Kevin Lynch's studies. For example *Routes, Edges, Districts, Nodes and Monuments*. The city image as represented by these categories is inserted and assessed as a series of pattern layers in the computer, revealing the combined existential foothold patterns and any potential pregnancy. This potential pregnancy within the patterns can then be projected into a skeleton of existential footholds or the bones around which the flesh of the city's re-facilitation can grow and mutate. (Ref. illustrations 1-4 which show a relationship between nodes, as an off centre circle and square, from those of the identifiable fabric fields or districts. The pregnant potential is then to produce a second set of negative nodes in the same geometric format, intersecting with the primary set. These new nodes would prime the development of fabric and facility in the interstitial space between identifiable fabric fields and so reconstruct the centre of the city.



9. Existing activity uses in the city centre of Liverpool.



10. Proposes activity uses in the city centre of Liverpool after application of Manifesto aims to each activity use pattern



11. Three dimensional wire frame rendition of proposes activity uses from the river.



12. Three dimensional wire frame plan view of the city centre with proposed activity

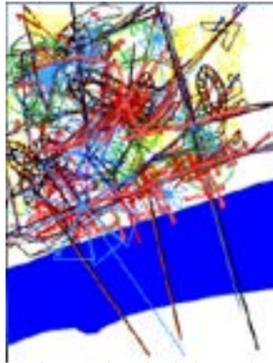
This initial study of the city as image was then overlaid with a further study of activity uses that comprehensively described the city. The activity uses were categorised as *Administration, Communication (Transportation), Education; Retail; Service; Accommodation; Entertainment; Production; Storage; Waste*. (Taken from Ubiquitous Urbanism) These activity uses extrapolated as block information patterns were then interpreted into distinctive activity patterns relative to the essential characteristics or behaviour of that use activity as a planned morphology within the city. (This interpretation was termed mega-lope behaviour.) Interpreted patterns were overlaid within the same space of the computer as those of the initial 'image patterns' revealing how the city functioned as a set of activity uses in relation to the populace's image of the city, or the mutable overlaying the immutable.

The methodology had nothing to do with the idea of a planned segregation within the city, rather it was concerned with the ability to see, comprehend and manipulate the patterns as an interrelated multi-use scenario. The patterns were used in conjunction with distinctive aims for the city's future represented as a manifesto, developing the flesh of facility within the bones of the 'existential footholds'. Each interpreted activity pattern having a potential pregnancy for growth or reduction relative to innumerable possible future scenarios (as in the manifestoes) for the city. The effect of amending one pattern can be assessed in relationship to the holistic artifice as can any permutation of amendments to any permutation of activity uses.

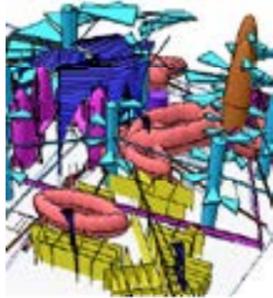
To summarise, the steps of the programme were; 1 Choose a dysfunctional city; Liverpool. 2 Analyse the city in terms of a set of observer - memory classifications. 3 Input the information as a series of extrapolated overlaid layers into a machine space. 4 Assess the information in combination and project the un-realised potential of the city as a skeleton. 5 Fix any existing 'bleeding' elements of this skeleton through city surgery. 6 Analyse and categorise the city's activity uses in a set that comprehensively describes the city but is not too complex in terms of the number of permutable layers. 7 Overlay these activity use patterns on the un-realised immutable city skeleton. 8 Interpret the activity uses into patterns that occupy the same space time whilst also representing the essential characteristics of the activity use as planned morphology's within the city (mega-lope behaviour). 9 Assess the city as a facility within a global context and project its future potential as a manifesto. 10 Apply these manifesto aims to the future of each activity use pattern amending each relative to the potential future. 11 Assess the impact of the mutable pattern potential's in combination with all other patterns. 12 Redesign the patterns such that the most appropriate permutation emerges relative to the manifesto aims. 13 Overlay, insert and amend the existing city fabric with the amended activity use potential's with forms that can mutate to survive.



13. Accumulated existing activity uses for the city of Liverpool; plan



14. Accumulated existing activity uses projected relative to the application of a manifesto; plan



15. Three dimensional view from the river of the activity uses as projected; wire frame.



16. Three dimensional view from the land to the river of the activity uses as projected.

Students undertook the programme in groups, though there were difficulties with the interpretation of the activity uses block patterns into three dimensional patterns representative of those activity uses (mega-lope behaviour). Students would constantly return to these abstract patterns (as a representation of the reality) in an attempt to distil the essence of that activity use with the most appropriate representative pattern. This was probably due to the complex nature of the city. Activity uses develop through the ages such that no singular pattern was in fact appropriate, however in order to recognise and manipulate the patterns within the computer it was essential that these three dimensional representations, of the activity uses, have similar pattern characteristics. Whilst the programme could be criticised for treating the city too much as an information artifice with only 15 different information categories, insinuating a divorcing from reality. This approach did yield a certain interpretive freedom in terms of the city's future, students were unafraid to create sweeping changes to the whole city. In addition this approach was only part of a wider programme, this part being used to devise an appropriate context for a specific area of the city called the interstitial layer. The programme progressed into 1:500 scale models of actual fabric in this area of the city.

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Programme bibliography and influence

An Evolutionary Architecture; John Frazer; Architectural Association London
The Image of the City; Kevin Lynch; MIT Press
Ubiquitous Urbanism; Columbia University Graduate School; cba
Finding Lost Space; Roger Trancik; Van Nostrand Reinhold Co;

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Gods Utility Function; Richar Dawkins; Scientific America, Nov 95