Instinctive Systems

Two Projects by Deane Simpson

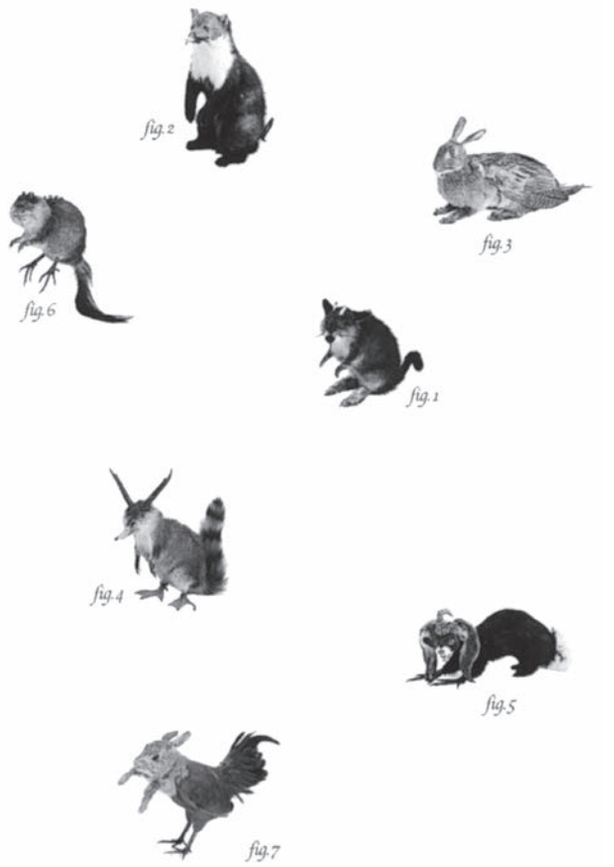


Figure 1: Thomas Gruenfeld, Misfits I-VII, 1991. Taxidermy. Courtesy Jousse Entreprise, Paris.

> In a Darwinian sense, the architectural species can only survive if it exhibits a biodiversity of forms and a constant supply of mutations that provide an agility in the face of changing environmental conditions.
>
> —Mark Wigley (2005: 39)

The last three quarters of the twentieth century produced certain types of urban planning (such as the master-minded hygienist neuroses of CIAM and the nostalgic delusions of New Urbanism) which, more often than not, failed due to an excess of will and intention. In the following collaborative projects in Detroit and Copenhagen the mode of willed 'master' planning with its formal preoccupations was suspended in favour of experiments with open and auto-reactive systems.[1]

These 'instinctive systems' challenge the genetic identity of particular 'species' through the generation of urban mutations. They have an affinity with the 'Misfits', a series of mutant creatures in the work of German artist Thomas Grünfeld, produced primarily through techniques of hybridisation. Additional techniques of mutation were deployed in the projects, promoting a diversity of chimeric outcomes.

Chimera[2]

Techniques of 'Code Modification', for example, were applied to the Detroit project and suggested alternate geo-political and time-space arrangements, perhaps best understood as intensifications of emerging space-time mutations.[3] The 'Mixing Panel' strategy applied to the Copenhagen X project led to the production of mutations at different scales. They included the block scale, in which patio house and closed block typologies were cross-bred, and small scale zones of anarchy, which operated as highly fertile mutation grounds.

1. This opposition is analogous to the distinction in the cognitive sciences between the behaviour of humans (characterized by self-conscious 'will') and animals (ruled by unconscious 'instinct' or 'impulse'). In The Monumental Impulse (1999: 183), George Hersey briefly mentions this opposition and questions its soundness (it is certainly an oversimplification but, in the present context, it offers a useful analogy). The bulk of Hersey's book is devoted to the description of two main concepts connecting the animal to architecture: first, a bio-architectural analogy (mostly operational at a formal level) and, secondly, concepts of buildings as extended phenotypes of species.

Detroit: Global City State[4]*, 2004 (Deane Simpson + John Lin with Niels Albertsen)*[5]

The city of Detroit has undergone massive changes in the last century as it grew rapidly into the centre of the US automobile industry. By the 1930s, Detroit was the fourth largest city in the US and by the 1950s its population had grown to 1.8 million people. From that point on, however, an uninterrupted process of sub-urbanisation occurred alongside the decentralisation of the automobile industry. By the year 2000, the city's population had dropped to 950,000 residents, while that of the surrounding suburban areas, known as 'Metropolitan Detroit', had grown to almost four million people. This left a high proportion of the city's predominantly 1920s building stock either demolished, or vacant, producing vast empty areas in the city.

Rather than interpreting the phenomenon of Detroit's 'shrinkage' as a situation to be reversed, the project suggested two strategies. Firstly, it proposed tools to support elasticity, accommodating both shrinkage and growth, which were no longer evaluated with reference to moral or intentional structures. Secondly, it viewed the existing condition of Detroit as an opportunity to test modifications to presupposed 'genetic codes' (e.g. geopolitical) that define the performance of the city.

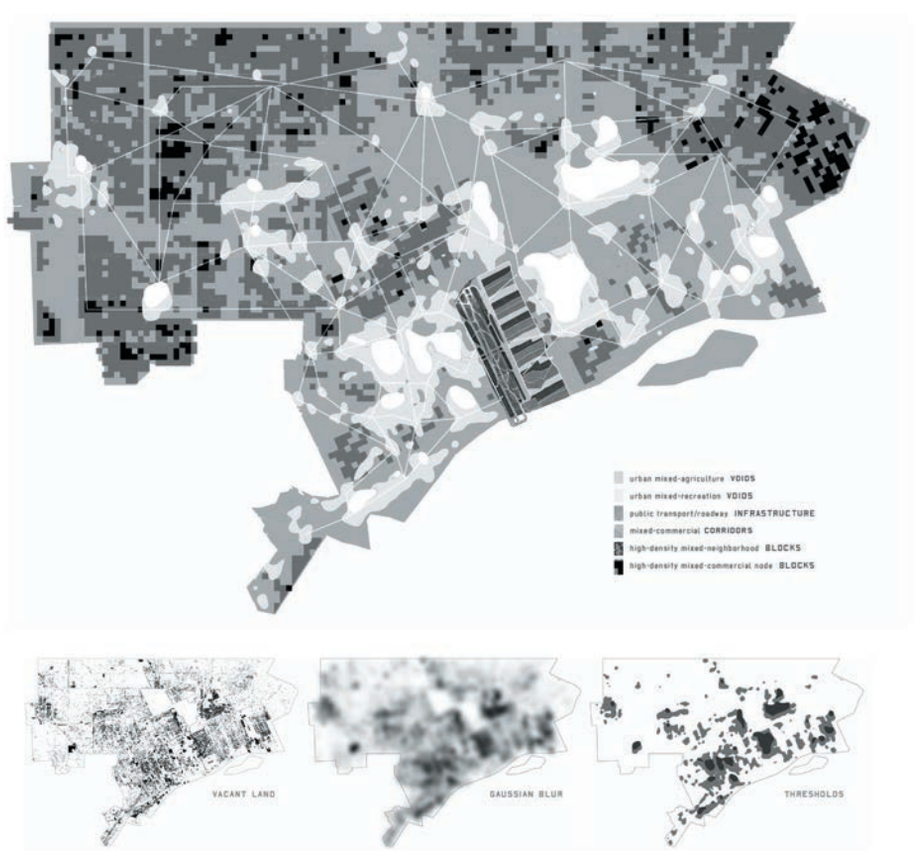


Figure 2: Detroit City-State plan. Areas of urban void, urban densification, in-between, new infrastructure, and proposed downtown airport location. Bottom left: existing land vacancy. Bottom middle: Gaussian blur filter applied. Bottom right: Threshold filter applied, determining extent of urban agricultural and urban recreational voids.

Perhaps the two projects discussed here could be framed as forms of 'instinctive systems', within which the act of design focuses on the identification of inbuilt codes of performance, rather than on singular pre-determined forms. They could be interpreted as *genotypes* rather than *phenotypes*. Genotypes describe the genome, which is the set of physical DNA molecules inherited from an organism's parents (code). Phenotypes describe the *phenome*, the manifest properties of an organism: its physiology, morphology and behaviour form.

2. A Chimera is an organism, or part of one, with at least two genetically different tissues resulting from mutation, the grafting of plants, or the insertion of foreign cells into an embryo.

3. Previously identified by urban geographer David Harvey in the contemporary city (Harvey, 1989: 284-307).

4. Submitted for the Shrinking Cities Ideas Competition in 2004

5. Niels Albertsen is an urban theorist, sociologist and political scientist. He is currently the Head of Department for Urban and Landscape Development (Institute 2) at the Aarhus School of Architecture in Denmark, where he has taught since 1975. John Lin is an architect working and living in Hong Kong. He was educated at the Cooper Union in New York City and is currently teaching at the Department of Architecture of The Chinese University of Hong Kong. His current research involves a collaboration with the Kowloon-Canton Regional Railway concerning processes of urbanization through rail infrastructure.

6. A Gaussian Blur is an Adobe Photoshop image manipulation filter.

7. Historically, the concept of citizenship has its origin in cities, beginning with the autonomous city-state. In recent times, nation-states have become weakened through the process of globalization, whereas urban regions have become increasingly independent. Some cities, such as Detroit, have been left behind in this process. This project proposed redefining the global positioning of Detroit by transforming it into an independent City-State.

8. CEBRA is a young Danish architectural firm based in Aarhus, Denmark. The studio has its focus on architectural design and urban planning and charges these with innovative pragmatism. Their design process is often fuelled by transdisciplinary collaborators, anchoring their projects both to contemporary architectural discourse and themes of wider relevance.

9. "Copenhagen X is a creative forum for innovation in dwellings, urban spaces and urban development in Copenhagen. We aim to open people's eyes to the changes in the city, and promote quality in urban development." http://www.copenhagenx.dk/template/t12.php?menuId=92

(a) Elasticity

Coherent areas of existing land use (or vacancy) were identified from the cluster-map data, using simple graphic imaging techniques. Gaussian blurs were applied to areas of existing land vacancy (extracted from the cluster-map).[6] A threshold filter was then applied to these areas, which produced contour edges indicative of the boundaries of proposed recreational and agricultural concentration. The latter also accommodated new infrastructure in the project, enhancing the connection between various dense areas. A similar, but block-pixellated technique was applied to areas of existing land-use, generating possible boundaries for residential and commercial concentration. Existing commercial strips were intensified to serve as bridges between different parts of the urban fabric. The remaining areas of the city, between those most used and those most vacant, were to operate as elastic zones accommodating both expansion and contraction. In the case of continued shrinkage, the consolidated agricultural zones would expand into the 'elastic' zone. If the population was to grow, consolidated residential and commercial areas would expand into the 'elastic' zone. In this aspect of the project, the city was not 'planned' in a top-down manner, but organized from the ground up, by the changes that occur in the city's data over time.

(b) Code Modifications

Some interventions were made into the existing genetic codes of the city, which significantly changed the regulatory apparatus to support mutations:

Geopolitics. The City of Detroit became an independent city-state, self-governing and independent from the United States.[7]
Immigration. All forms of immigration control into the city were eliminated, allowing Global Citizenship, Rights and Duties.
Transport Hub. The airport was relocated from what was formerly known as the periphery of the city to what was formerly known as the centre of the city. Abandoned inner-city skyscrapers too expensive to demolish were re-programmed as airline terminals, hotels etc.

Figure 3: Airport view looking toward Downtown Detroit. Eastern Local evening-Time.

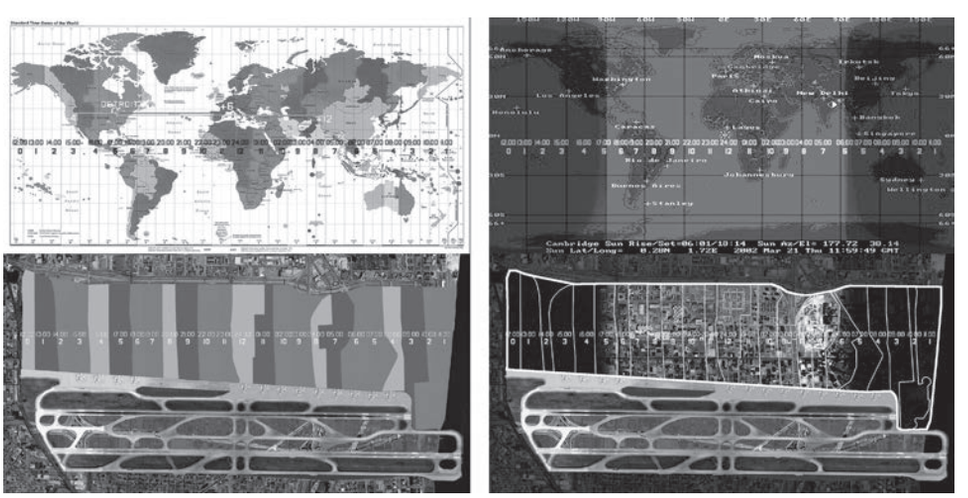


Figure 4: International time-zones (left) and artificial day-time lighting effects (right) at downtown airport location.

Time-Space. The downtown area adjacent to the relocated airport runway was redefined according to the 24 time zones of the world, in parallel with the operation of artificial daylighting. Visitors were thus able to arrive at their destination in the same time zone from which they left.

Copenhagen X: Orestad, Denmark. 2004-2005 (CEBRA + Deane Simpson)[8]

This Urban Design Proposal commissioned by Copenhagen X, a creative initiative interested in innovation in urban development,[9] in collaboration with the City of Copenhagen and Orestad,[10] proposed a 'supplementary' urban study to address the perceived shortcomings of a previous, unbuilt urban proposal and suggested a new 'Local Plan' for the area.[11]

The partially state-funded assignment requested a proposal for approximately one million square meters of mixed-use space (residential, commercial and public), with a projected population of 10,000 people, on a 50 hectare site in Copenhagen, Denmark. The site is located approximately six kilometres south of the historical centre of the city. It belongs to a strip of land, 500 metres wide, extending from the city centre along a new metro rail line that is currently under development. Importantly, the site is located at the junction of road and rail infrastructures that link Denmark to Sweden (29 minutes by rail to Malmo, Sweden), as well as connecting the airport of Copenhagen (six minutes by rail) to the historical centre (seven minutes by rail).

The original unbuilt urban plan's focus was on defining a controlled formal outcome for the area. Its major urban design gesture involved three wide, curved 'boulevards' functioning as the area's primary public spaces. Each boulevard incorporated a different landscape concept, such as 'canal', 'park', and 'forest'. The proposal for the site's built fabric was characterized by a homogeneous, traditional closed-block urban structure of almost uniform height across the whole of the development.

Rather than producing a single and fixed alternative to the unbuilt plan, an open set of variables was defined that could generate multiple possible solutions. They could be adjusted, as on the sliding scales of a music mixing panel, according to the requirements of the various parties involved. Variables included the level of concentration and programming of public space; the extent of programmatic mixing; the orientation of the circulation system towards car or metro traffic; the variation in maximum height of building envelopes; the modulation of roofscape (incorporating landmarks), etc.

This system of open variables operated in three ways: first, as an internal tool for the design team; second, as a tool in negotiations toward a 'Local Plan' between the City, developers, community groups and the architects; and thirdly, as a way of producing an elastic 'Local Plan' that moved beyond the fixity and content of the conventional 'Local Plan'. This would allow for change over time, as well as greater flexibility in specific planning decisions. Five plan variations were described, one of which was 'frozen' and further developed in order to demonstrate the potential of the system. It also offered a clear critique of the existing proposal. The 'frozen plan' proposed a shift toward more concentrated and differentiated public space; a clearly articulated roofscape supporting a differentiation of neigh-

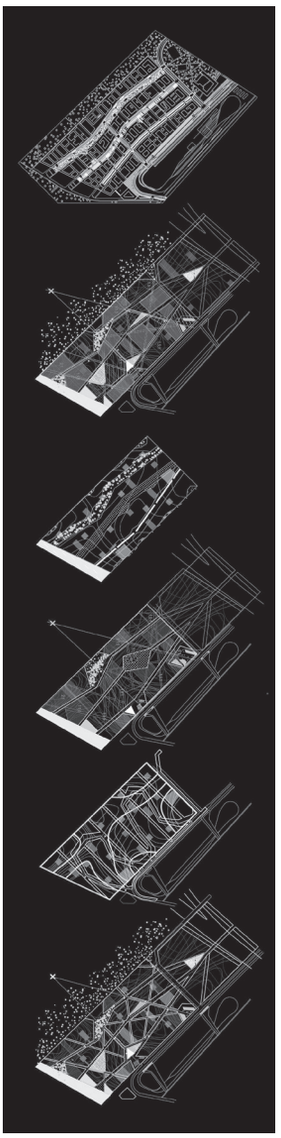
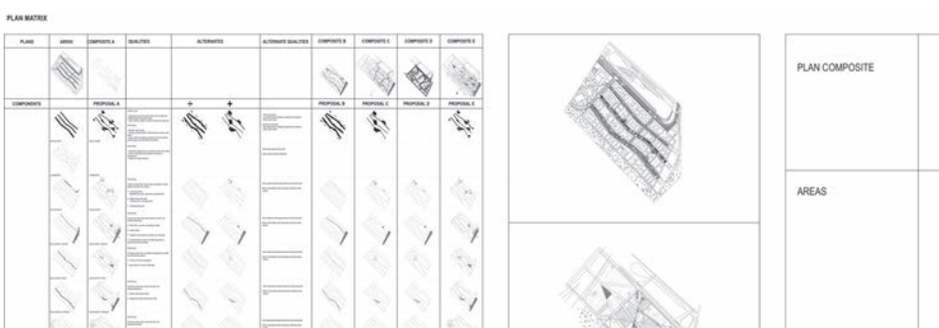


Figure 5: Multiple plan scenarios for Copenhagen urban design proposal.

10. The Orestad is a new municipal entity which will incorporate six towns. Four interdisciplinary teams were commissioned to make proposals within a 'Parallel Assignment' structure. This interdisciplinary team also included Peter Hesseldal (journalist and researcher) and Designit Bluesky (graphic and concept designers). Development of the alternate urban proposal occurred through a series of workshops in collaboration with the City of Copenhagen, the developer of the site 'Orestad' and external advisors including Adrian Geuze of West 8. The existing proposal to be addressed was a 1996 competition-winning scheme from the Finnish Architects Arkki.

11. A 'Local Plan' is the legal document that defines possible building activity at the local scale. It typically

Figure 6: Aerial view looking toward Downtown Copenhagen of one proposed development scenario with differentiated and concentrated public space and articulated roofscape.



bourhood areas within the overall plan; an increased level of programmatic mixing; a reorientation of the street system toward the main metro-rail entry points; and the introduction of areas free of any planning constraints: proposed areas of anarchy.

In addition to working at the scale of the overall urban plan, the project addressed the scales of buildings as well as individual residential units. At the building scale, for example, smooth transitions were proposed between the normally distinct typologies of the patio house and closed block structure—transitions that were based on, amongst other factors, the maintenance of natural light.

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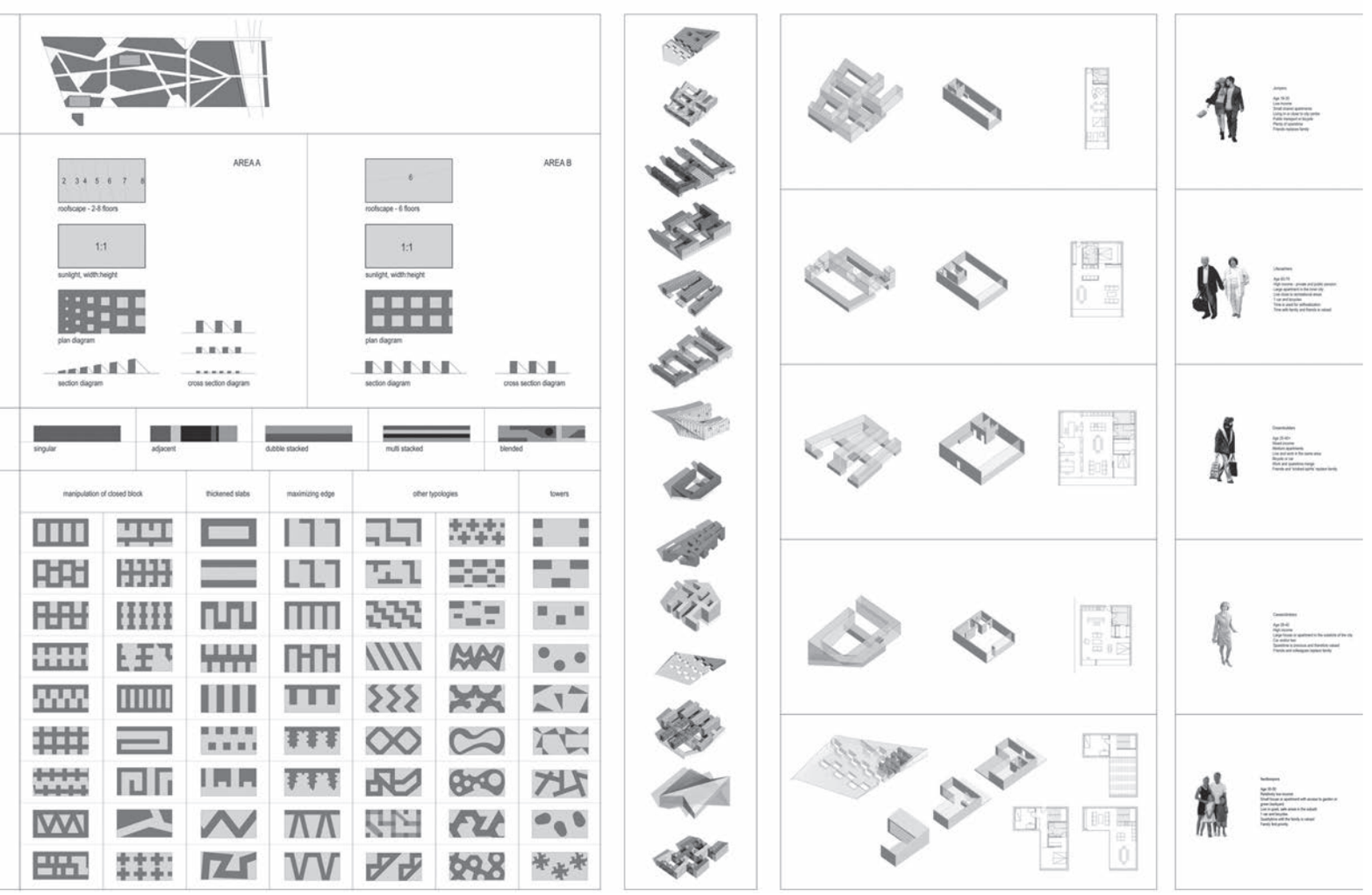

Figure 7: Mixing panel as elastic Local Plan, and design and negotiation tool.