Urban Morphology: DNA for the Architecture of Vital Cities

Tuesdays at the APA
August 24, 2010 5:30pm
American Planning Association Chicago
Burnham Conference Center
205 N. Michigan Ave.
Suite 1200
Chicago, IL 60601

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Image: Pedestrian Network Potential analysis for Chelsea Barracks re-urbanization proposal. Samuel Lima, M.Arch.'10
current morphology contributions

British Conzenian School
M.R.G. Conzen’s (from mid-1950s) tripartite analysis of townscape or urban landscape:
Street, block, and lot patterns.
Building fabric (types)
Land and building use

Italian Muratori School.

The interdisciplinary conference of ISUF wants to address to representatives of such disciplines who are interested in the study of Urban Morphology, and wants to take up a wide range of subjects. Special concerns of the conference should be:

- Urban morphological theory
- Models of town planning in former and present times
- Methods to analyze and to map the development of townscape
- The internal dialectic of form and function in urban development
- The research of the morphogenetic history of particular towns
- Historical dimensions of the evolution of townscape varying about different cultural contexts
- Historic preservation, sympathetic architecture, and innovative design as strategies of redevelopment of urban areas
- The morphology of urban open space in history and planning
- Defensible architecture and gated communities in former and present times
- Problems of townscape concerning to growing or shrinking towns
- Perceptual awareness and cognitive mapping of urban space
- The design of digital cities

2009 Guangzhou
2008 Artimino
2007 Ouro Preto
2006 Stockholm
2005 London
2004 Newcastle pon Tyne
2003 Trani
2002 Como
2001 Cincinnati
Bottom right.“City of Composite Presence,” Griffin and Kolhoff, published in *Collage City*. 
Léon Krier. Left. Three conceptions of urban space and a fourth case where object buildings shape no urban space. 1978.

Right. Tuning of Urban Architecture from *The Architecture of Community*, 2009. A nine square matrix of three urban morphological types and three architectural style types. Some are better than other.

morphology project
architecture of cities

morphology: drilling down to the making of architecture in student projects

Elgin. Figure-ground map. 1887. [S. Cullum, M.Arch.’09, B. Herr, M.Arch.’09, and Kevin Svensen, M.Arch.’09].
Elgin. Figure-ground map. 1913. [S. Cullum, M.Arch.’09, B. Herr, M.Arch.’09, and Kevin Svensen, M.Arch.’09].
Elgin. Figure-ground map. 1950. [S. Cullum, M.Arch.’09, B. Herr, M.Arch.’09, and Kevin Svensen, M.Arch.’09].
Elgin. Figure-ground map. 2005. [S. Cullum, M.Arch.’09, B. Herr, M.Arch.’09, and Kevin Svensen, M.Arch.’09].
Elgin. Diagrams and examples of building types and type assemblages. [S. Cullum, M.Arch.’09, B. Herr, M.Arch.’09, and Kevin Svensen, M.Arch.’09].
Elgin. Map indicating building types. 1887. [S. Cullum, M.Arch.'09, B. Herr, M.Arch.'09, and Kevin Svensen, M.Arch.'09].
Elgin. Map indicating building types. 1913. [S. Cullum, M.Arch.’09, B. Herr, M.Arch.’09, and Kevin Svensen, M.Arch.’09].
Elgin. Maps indicating land uses at landmark dates: 1887, 1913, 1950, and 2008; and Plan Units at same landmark dates. [S. Cullum, M.Arch.’09, B. Herr, M.Arch.’09, and Kevin Svensen, M.Arch.’09].
Elgin. Five cases showing change of use in building types at four landmark dates. [S. Cullum, M.Arch.’09, B. Herr, M.Arch.’09, and Kevin Svensen, M.Arch.’09].
Elgin; detailed block study. Shows local patterns. [S. Cullum, M.Arch.’09, B. Herr, M.Arch.’09, and Kevin Svensen, M.Arch.’09].
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Visualizing Morphological Conditions for Pedestrian Connectivity

Left. “Survey of Wisconsin and parts of Iowa, Illinois, Indiana, and Michigan pursuant to the Land Ordinance of 1785.” Date after 1840? [Short ?].
Right. Detail with line marking railway from Elgin to Galena.
Left. Elgin township (top left) in detail of map at right.
Right. Cook County and adjacent western townships. Illinois. 1851. [?]
Elgin. Original Plat. 1842.
Gifford’s plat superimposed over the Sanborn Insurance Map of 1913. In this detail, we can see the original platting has been subdivided. Along Chicago Street, the original plats, 66 feet in width, are settled with buildings occupying lots ranging from the full 66 feet (for example, see the City Hall at the southwest corner of Block 10) to buildings of 22 feet in width as we can see are common along the north and south sides of Chicago Street in Blocks 15 and 16 and 11.
Left. 168-172 E.Chicago St., built 1902. Sanborn Map, 1913; portion. Indicated is subject building in Block 16, just to the west of the railway. Note that in its 44 foot width there are doors to two street-level shops and a door to the central stair for access to flats above.
Fountain Square; Elgin. 1902.
Elgin. Map. Late 1950s. Lighter tone indicates buildings razed for parking lots.
Left. Elgin; aerial photo, c.1995.  Right. Elgin; map diagram.  Red lines key civic campus buildings of late 1960s.  Yellow squares indicate a police station, parking garages, a fitness center, and a library. These are marked by yellow squares. In both campaigns, big floor plate buildings with limited entries were placed deep in big blocks and collared with parking.
Elgin. Data visualization showing pedestrian network potential. North to the top-left with buildings ranged in blocks along the north-south Douglas Street and the east-west E.Chicago Street. [Cullum, Herr, and Svensen].
Within a four-hundred foot radius of door A in the subject building (ghosted here in red), doors are counted that can be connected by axes. Those doors that cannot be connected by straight line axes are not counted although there is some fudging. The number of axes is multiplied by the number of hours this door is active. Door A is the door of an antique shop so this door is active during business hours (roughly 8 hours per day, 6 days per week, and 52 weeks per year for a factor of approximately 2500). The count is repeated for door B in the subject building (now the tangerine circle). Again, the number of axes is multiplied by the number of hours this door is active. Door B is the active door for a number of lofts in the upper floors. We computed this as a factor of about 61,000. The first door’s activity potential and the second door’s activity potential are summed.
Elgin. Data Visualization in which floor plan of each building is extruded vertically to represent the sum of the building’s network activity potential.
typomorphogenetic applications in student architecture projects

Church and shops. Elgin. Caleb Reed.
Elgin. Figure-Ground Showing Re-urbanization Proposal and Elgin Symphony Hall. Steven Cullum.

thank-you