ARCH6228: Analytical Investigations in Urban Design:
Urban cultures of shopping
Fall 2017 – CRN 91479
Tuesdays and Thursdays, Howey (Physics) S204, 3.05-4.25
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Catalogue Description: Measures of urban and spatial form. Analysis of street connectivity. Models of space use and spatial cognition. Comparison and evaluation of design alternatives

Aims
This is a research oriented elective class, with two aims.
1. To introduce theories or urban space and associated methods of spatial analysis that can be applied to: (a) model the human functions of urban space; (b) benchmark design alternatives; (c) evaluate competing designs to support design choices; (d) inform the design imagination.
2. Collectively pursue a particular research question, a different one each time the class is offered. The question to be addressed this year is the relationship between urban culture and shops.

Learning outcomes
The most important learning outcome of any ambitious research oriented course is not easily assessable in the short term: helping to develop a fruitful way of thinking about a field of inquiry and an area of practice. This course is associated with the following particular learning outcomes that can be readily assessed.
1. Understanding the basic theoretical concepts, such as closeness centrality or betweenness centrality, that help us make sense of streets as networks.
2. Understanding and ability to work with measures of spatial patterns such as: (a) integration/closeness centrality; (b) choice/betweenness centrality; (c) metric reach/service area; (d) directional reach.
3. Ability to use computational tools for space syntax analysis, such as UCL DepthMap and Spatialist_Lines.
4. Ability to construct typologies based on morphological analysis.

Course assignments and course assessment:
25% of the grade will be based on contributions to workshop sessions and class discussions. 75% of the grade will be based on the assessment of three class assignments.
Assignment 1 (25% of the course grade): An analysis of a small sample of urban areas.
Assignment 2 (25% of the course grade): An analysis of the relationship between building footprints and street network structure in a small sample of urban areas.
Assignment 3 (25% of the course grade): A final presentation incorporating the work completed for assignments 1 and 2 and advancing an argument on shops as an aspect of urban culture.

Prior knowledge and eligibility:
No prior knowledge with the software for spatial analysis (ArcGIS10, UCL DepthMap, Spatialist_Lines) is assumed. Familiarity with Grasshopper is desirable but not a precondition for taking the course. While designed for Master of Architecture, Master of Urban Design and Ph.D. with a major in Architecture students, the course is open to City Planning students interested in the physical form of settlements, and also to Architecture undergraduates.