空间句法术语汇编

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空间句法术语汇编根据2012年伦敦大学学院的空间句法网络培训平台项目中的术语（http://otp.spacesyntax.net/glossary/）编辑而成。当时笔者作为伦敦大学学院副研究员，负责术语的汇编以及翻译工作，Bill Hillier教授，Alan Penn教授，Tim Stonor, Kayvan Karimi等对汇编术语都给予校核，Stephen Law对后期工作进行优化。由于网站运行较慢，不便于国内空间句法爱好者查询，特再次进行整理工作。

抽象人造物 （Abstract Artefacts）

抽象人造物是采取基本抽象形式的一种人造物体，如语言、文化、社会机构、乃至社会本身。其目标是生成并管理分散的活动，并通过这种方式，将讲演、人们行为或社会表演等分散的集体活动转变为某种表象的系统。

Abstract artefacts are a class of artefacts taking a primarily abstract form, such as language, cultures, social institutes and arguably society itself. They aim to generate and govern dispersed events, and through this to convert a dispersed collectivity of speakers, behaviours or social actors into some semblance of a system.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.65-66

相邻空间（Adjacent Spaces）

相邻空间是直接与某个特定空间相通的空间。

Adjacent space means the space being directly connected to a specified space.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.23-24.

智能体的分析（Agent Analysis）

在空间句法领域，智能体的模型是模拟个性化的运动行为，其中智能体根据视线关系分析而获得的确定视线范围，选择自己的运动方向。这些智能体预先计算出任何给定位置可视信息。基于智能体的模式允许程序员模拟人可能的行为，因为他们通过环境中导航。 参考智能体/自动机。

In the field of space syntax: an agent-based model is a simulation of individual movement behaviour in which ‘agents’ choose their direction of movement based on a defined visual field derived from visibility graph analysis, in which agents have access to pre-computed information about what is visible from any given location in the map. The agent-based model allows the programmer to simulate the likely behaviour of people as they navigate through the environment. See: Agents/Automata.

来源：

Penn, A. & Turner, A. (2001) Space syntax based agent simulation. In: (Proceedings) 1st International Conference on Pedestrian and Evacuation Dynamics. : University of Duisburg, Germany,1-16. pp.7.

同步智能体（Agent of Synchronisation）

同步智能体被定义为虚拟的人类认知主体，可同步协同复杂空间的序列体验，整合为一次性显示的图景，作为空间序列的再现以及解决问题的工具。

Agent of synchronisation is defined as human cognitive subject who is able to synchronise a series of experiences of the spatial sequences making up a complex space into an ’all-at-once’ picture which serves both as a representation anad a problem-solving device.

来源：

Hillier, B. (2003) The knowledge that shapes the cities: the human city beneath the social city. In: (Proceedings) 4th International Space Syntax Symposium. : London, UK. pp. 01.15-16

智能体/自动机（Agents/Automata）

智能体是计算机模拟的自动化个体，具备体外的存储能力，可以被其所在环境中所有其他智能体所读取。该智能体不仅能编码对象的位置，还可以编码可达性结构的信息。

Agent is defined as autonomous agent with a form of exosomatic (outside the body) memory common to all agents in an environment. It encodes not only object locations, but also information about the accessibility structure.

来源：

Penn, A. & Turner, A. (2001) Space syntax based agent simulation. In: (Proceedings) 1st International Conference on Pedestrian and Evacuation

Dynamics. : University of Duisburg, Germany. pp.7.

聚集过程（Aggregation Process）

聚集过程体现为将简单的个体对象聚集为一个复杂的复合物。例如，聚落来源于一组房屋的聚集。

Aggregation process is defined as a procedure for aggregating simple single objects into a complex composite object, such as a settlement generated by aggregating together a collection of houses.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp. 35.

所有线分析（All Line Analysis）

所有线的分析是关于所有轴线的句法分析，可合理地视为空间中所有物体所带来的视线影响分析，因为这些线被定义为任意两个物体上任意两个顶点之间可以相互对望的连线。

All line analysis means the syntactic analysis conducted for all line axial map. It is reasonable to think of this as an analysis of the field of visibility created by the placed objects, since every line defines a limit of visibility created conjointly by a pair of vertices from a pair of objects.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK.pp.271;

Penn, A., Conroy, R., Dalton, N., Dekker, L., Mottram, C.,Turner, A. (1997), Intelligent architecture: new tools for the three dimensional analysis of space and built form, in Proceedings of the 1st International Symposium on Space Syntax University College London, London, pp. 30.3-4;

Turner, A., Penn, A., & Hillier, B. (2005),An algorithmic definition of the axial map. Environment and Planning B: Planning and Design 32(3):425 - 444. pp.429

所有线的轴线图（All-line Axial Map）

所有线的轴线图指根据所有物体上彼此可相互对视的顶点而绘制的所有切线之集合。

All line axial map is a set of lines made up of all lines drawn tangent to vertices that can see each other.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.271;

Penn, A., Conroy, R., Dalton, N., Dekker, L., Mottram, C.,Turner, A. (1997), Intelligent architecture: new tools for the three dimensional analysis of space and built form, in Proceedings of the 1st International Symposium on Space Syntax University College London, London, pp 30.1-30.19. pp. 30.3-4;

Turner, A., Penn, A., & Hillier, B. (2005),An algorithmic definition of the axial map. Environment and Planning B: Planning and Design 32(3):425 - 444. pp.429

全中心性（Allocentricity）

全中心性指从系统的每个点去观察系统所构成了空间表达，而非从某个特定的点去观察系统。

Allocentricity is defined as the property tied to a representation of all points from which the system can be seen, rather than a particular point of view from which the system is seen.

来源：

Hillier, B. (2003), The architectures of seeing and going:or, are cities shaped by bodies or minds? And is there a syntax ofspatial cognition? In: (Proceedings) 4th International Space Syntax Symposium: London, UK. pp.06.18

建筑的分析理论（Analytic Theory of Architecture）

建筑的分析理论在用于指导设计师之前，试图将建筑物作为现象去理解。

An analytic theory of architecture is one which seeks to understand architecture as a phenomenon, before it seeks to guide the designer.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.40-41

角度选择度（Angular Choice）

角度选择度指任意两两线段之间，角度变化最小的路径穿过某条线段的次数，其中角度距离为沿路径所度量的相邻线段之间的角度变化之和。

Angular choice measures how many least angular paths between every pair of segments, each of which lies on under the definition of angular distance, that is, the angular change along the lines between two adjacent segments.

来源：

Hillier , B. & Iida, S. (2005), Network and psychological effects in urban movement, In: A.G. Cohn and D.M. Mark (Eds.): COSIT 2005, LNCS 3693, pp. 475-490

Hillier, B. (2009),Spatial sustainability in cities: organic patterns and sustainable forms. In: Koch, D. and Marcus, L. and Steen, J., (eds.) Proceedings of the 7th International Space Syntax Symposium. (pp. p. 1). Royal Institute of Technology (KTH): Stockholm, Sweden, k01.1-20. pp. k01.3-4.

角度整合度（Angular Integration）

角度整合度是标准化的角度总深度的倒数，可用于不同系统的比较。这根据每条最近路线的角度变化之和，计算每一条线段距离其他所有线段的远近。

Angular integration is the reciprocal of the normalised angular total depth. It can be compared across systems. It measures how close each segment is to all others in terms of the sum of angular changes that are made on each route.

来源：

Hillier , B. & Iida, S. (2005), Network and psychological effects in urban movement, In: A.G. Cohn and D.M. Mark (Eds.): COSIT 2005, LNCS 3693, pp. 475-490

Hillier, B. (2009),Spatial sustainability in cities: organic patterns and sustainable forms. In: Koch, D. and Marcus, L. and Steen, J., (eds.) Proceedings of the 7th International Space Syntax Symposium. (pp. p. 1). Royal Institute of Technology (KTH): Stockholm, Sweden, k01.1-20. pp. k01.3-4.

角平均深度（Angular Mean Depth）

角平均深度是所有角度变化最小的路径的角度变化之和与所有角度交叉口总数之商。在 DepthMap 中，其定义为，从起始线段到其他线段的所有角度变化最小路径的角度变化之和除以那些路径上的线段之和。

Angular mean depth is the sum of the shortest angular paths over the sum of all angular intersections in the system. In DepthMap, it is defined as the sum of the shortest angular paths over the sum of the number of segments encountered on the paths from the root segment to all others.

来源：

Turner, A. (2001) Angular Analysis. In Proceedings of the 3rd International Symposium of Space Syntax, 1-13. pp. 4; Turner, A. (2004), DepthMap4: A Researcher's Handbook, UCL. pp. 28-29

角半径（Angular Radius）

角半径指以角度为加权的半径，使得分析限制于较小的子集。

Angular radius means angular weighted radius to restrict analysis to a smaller area of a graph.

来源：

Turner, A. (2004), DepthMap4: A Researcher's Handbook, UCL. pp. 30

角度总深度（Angular Total Depth）

角总深度为从特定线段到其他所有线段的最小角度变化的路径之集合的总角度之和。

Angular total depth is the cumulative total of the shortest angular paths to a selected segment as root.

来源：

Turner, A. (2004), DepthMap4: A Researcher's Handbook, UCL. pp. 29

角总线段长度（Angular Total Segment Length）

角度总线段长度指沿角度变化最小的路径，从起点到终点，所有线段的长度之和。

Angular total segment length is the accumulative sum of the length of the segments along the least angular change path from an origin to a

destination.
来源：
Turner, A. (2004), DepthMap4: A Researcher’s Handbook, UCL.pp. 29

角状（Angularity）

角状被定义为角度变化，从而可能对人们系统性的步行和导航方式产生了影响。在移动的方向上较小的角度变化被认为是从一个空间到另一个空间的细微变化，然而移动方向上角度的显著变化可视为刻意的行为方式。据推测，人会选择角度变化尽可能小的路径。
Angularity is defined as angular change that is likely to have an impact on the way people walk and navigate through a system. Smaller angular changes in the direction of movement should be considered as minor shifts from one space to another, but significant changes in direction could by comparison be seen as deliberate acts in navigation. It is conjectured that people will choose the route which will result in the minimum angular change in direction.
来源：
Turner, A. (2000), Angular analysis: a method for the quantification of space, Woking Paper 23, Centre for Advanced Spatial Analysis, UCL, UK. pp.3;
Dalton, N. (2001), Fractional configurational analysis and a solution to the Manhattan problem. In: Proceedings of the 3rd International Space Syntax Symposium, 26.1-13. pp. 26.8-9.

面积周长比（Area-Perimeter Ratio）

面积周长比指某个凸空间的面积与周长之商。当我们绘制凸空间图时，可识别出最“胖”的凸空间。
Area-perimeter ratio is defined by dividing area by perimeter of a convex space, in an attempt to identify the ’fattest’ convex when we draw convex map.
来源：
Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.17

a 型空间（a-Space or a Type Space）

a 型空间是只有一个连接的空间。它是尽端空间，不可能移动到其他空间之中，除非原路返回。

A-Type space is space with a single link. It is the dead-end space through which no movement is possible to other spaces.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.250

非对称（Asymmetry）

非对称指系统中两个元素，如 A 和 B 两个方块，方块 A 与 B 之间的关系不等同于方块 A 与 B 之间的关系。例如方块 A 包含方块 B。

Asymmetry means that when a system has two elements, such as cell A and cell B, the relation of cell A to cell B, is not the same as the relation of cell B to cell A, for example, if A contains B.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.62

吸引点的非对称性（Attractional Inequalities）

吸引点的非对称性体现为城市结构中的主要中心和次中心模式，涵括较大局部中心以及较小社区中心等一系列中心，前者可以是热闹非凡的城市主要中心相媲美，后者可以是一组小店铺和其他公共设施的聚集。

Attractional inequalities are expressed by the pattern of centres and subcentres in urban structure, ranging from large local centres which can rival or even outstrip the main centre in levels of activity, down to the small groups of shops and other facilities that act as focal points for local areas.

来源：

Hillier, B. (1999),Centrality as a process: accounting for attraction inequalities in deformed grids. Urban Design International , 4 (3/4) 107 - 127. pp.109-110

吸引点（Attractor）

吸引点指那些有潜力成为出行目的地的建筑物或城市地区，或那些能够产生大量人群的场所，如足球体育馆。

Attractor refers to buildings or urban features having the potential of generating the trips to and from those built forms (such as a football stadium).

来源：

Hillier, B., Penn, A., Hanson, J., Grajewski, T., and Xu, J. (1993), Natural Movement: or. Configuration and Attraction in Urban Pedestrian Movement. Environment Planning B, 20(1) 29-66. pp.29

平均效应（Averaging Effect）

平均效应指随半径增加，线段数目也增加，于是线段的长短差别因素变得不重要，从而线段的总长度近似等价于线段数量。

Averaging effect means that with the increasing number of segments with increasing radius, the differences in segment lengths average themselves out, so that the toal segment length very closely approximates simple segment count.

来源：

Hillier, B., Turner, A., Yang, T., Park, H-T. (2007, 2010) Metric and topo-geometric properties of urban street networks: some convergences, divergences and new results. The Journal of Space Syntax, V(1) 2, 258-279. pp.263

轴线分析（Axial Analysis）

轴线分析是采用轴线图去表达空间布局，并用于分析。详细步骤，参见《空间的社会逻辑》第 99 页到第 123 页。

Axial analysis is a way of analysing spatial layout represented by axial map. For the detailed procedure, see Hillier, B. & Hanson, J. (1984), pp.99-123.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.99-123.

轴线穿行度（Axial Choice）

轴线穿行度是计算轴线图中的穿行度，计算任意一条轴线位于任意两两轴线之间的最短拓扑路径的概率。

Axial choice is the choice calculated based on axial map. It measures how often an axial line lies on the shortest topological paths any pair of axial lines.

来源：

Hillier, B., Burdett, R., Peponis, J., Penn, A. (1987), Creating Life: Or, Does Architecture Determine Anything? Architecture et Comportement/Architecture and Behaviour , 3 (3) 233 - 250. pp. 237

轴线连接度（Axial Connectivity）

轴线连接度是与某条轴线直接相交的其他轴线的数量。

Axial connectivity is the number of other lines an axial line intersects.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.103

轴线控制度（Axial Control）

轴线控制度指某条轴线控制与其直接相邻的其他轴线的程度。参考控制度。

Axial control measures the degree to which one axial line controls its immediately neighbouring lines. For detail, see Control.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.109

轴线深度（Axial Depth）

轴线深度计算从起始轴线到所有目的地轴线的拓扑步数（即转弯次数）。只要从一条轴线到另一条轴线需要通过其他轴线，其拓扑深度就存在。

Axial depth is topological steps from an axial line of origin to other line(s) of destination. It exists wherever it is necessary to go through intervening lines to get from one to another.

来源：
Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.104

轴线熵（Axial Entropy）

轴线熵计算轴线的熵值，根据从某条轴线到其他轴线的拓扑深度序列，而非拓扑深度本身，去计算那条轴线的空间重要程度。参见熵。
Axial entropy measures the entropy values of axial lines, a measure of the distribution of locations of spaces in terms of their depth from a space rather than the depth itself. For the calculation of entropy in DepthMap, see entropy.
来源：
Turner, A. (2004), DepthMap4: A Researcher's Handbook, UCL. pp. 15;
Tuner, A. (2001) Angular Analysis, 3rd International Symposium on Space Syntax, Georgia Institute of Technology, 7-11 May 2011. pp.8

轴线全局整合度（Axial Global Integration）

轴线全局整合度是无限制半径下的轴线的整合度，这用于表达最大尺度的整合度模式。
Axial global integration is defined as the integration values of axial lines at the infinite radius, which can be used to represent a picture of integration pattern at the largest scale.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.99

轴线关系图（Axial Graph）

轴线关系图是从轴线图转换来的关系图，其中轴线被表示为点，而连接被表达为两点之间的连线。
Axial graph is the graph converted from axial map, in which the lines are represented as nodes, and the intersections of lines as connections between the nodes.
来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.93-97;
Turner, A., Penn, A., Hillier, B., (2005) An Algorithmic Definition of the Axial Map. Environment and Planning B, 425-444. pp. 415-6.

轴线调和平均深度（Axial Harmonic Mean Depth）

轴线调和平均深度是每个空间到其他空间的深度的倒数的算术平均数的倒数。
Axial harmonic mean depth is the reciprocal of the arithmetic mean of the reciprocals of depths from one space to all others.
来源：
Turner, A. (2004), DepthMap4: A Researcher’s Handbook, UCL.pp.15.

轴线整合度（Axial Integration）

轴线整合度计算轴线的整合程度。数值高表示某个空间具有较高的整合度。
Axial integration is a measure of integration of axial lines. High values means an axial line with a high degree of integration.
来源：
Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.109

轴线可理解度（Axial Intelligibility）

轴线可理解度表示根据与某条轴线直接相连的轴线数量，去判断那条轴线在整个系统中的重要程度。这体现为轴线连接度与其全局整合度的相关性。较高的相关度表示较高的可理解度，暗示从局部空间结构可以推论出整体空间结构。
Axial intelligibility indexes the degree to which the number of immdediate connections a line has is a reliable guide to the importance of that line in the system as a whole. If locally well-connected lines are also integrating lines, and then the correlation will be strong and the system will have intelligibility.
来源：
Hillier, B., Burdett, R., Peponis, J., Penn, A. (1987), Creating Life: Or, Does Architecture Determine Anything? Architecture et Comportement/Architecture and Behaviour , 3 (3) 233 - 250. pp.237

轴线强度（Axial Intensity）

轴线强度是一种计算轴线强度的变量。这是另一个版本的整合度，只是把每条轴线的熵的因素排除掉了。

Axial intensity is a measure of intensity of axial line. It is another version of integration but taking account of entropy of each line.

来源：

Turner, A. (2004), DepthMap4: A Researcher's Handbook, UCL. pp. 25

Park, H., (2005) Before Integration: A Critical Review of Integration Measure in Space Syntax. In: Proceedings of 5th Space Syntax Symposium, 555-572. pp.564

轴线（Axial Line）

轴线指经由空间中一点尽可能延长的最长直线。这可以客观地生成。

Axial line is defined as the longest straight line representing the maximum extension of a point of space. It can be objectively created. For details, see Turner et al. (2005).

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.17, 91;

Turner, A., Penn, A., & Hillier, B. (2005) An algorithmic definition of the axial map. Environment and Planning B: Planning and Design 32(3):425-444

Vaughan L., Geddes I. (2009), "Urban form and deprivation: a contemporary proxy for Charles Booth's analysis of poverty" Radical Statistics 99 46-73

轴线长度（Axial Line Length）

轴线长度是度量轴线的米制距离。

Axial line length measures the metric length of axial lines.

来源：

Turner, A. (2004), DepthMap4: A Researcher's Handbook, UCL. pp.25

轴线局部整合度（Axial Local Integration）

轴线局部整合度是半径为3（起始轴线本身默认为1步，从起始轴线到其他轴线为2步）的轴线整合度，这表示局部空间的整合程度模式。

Axial local integration is defined as integration values of axial lines at the radius 3, which can be used to represent a localised picture of integration.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.99

轴线图（Axial Map）

轴线图是一组穿过所有凸空间的最长直线，其数量最少，且每条轴线至少与其他一条轴线相连接。

Axial map is the least set of the longest straight lines which passes through each convex space and makes all axial links. Or more formally, axial map is the minimal set of axial lines such that the set taken together fully surveils the system, and that every axial line that may connect two otherwise-unconnected lines is included.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.17, 91;

Turner, A., Penn, A., & Hillier, B. (2005),An algorithmic definition of the axial map. Environment and Planning B: Planning and Design 32(3):425 - 444. pp.428

轴线平均深度（Axial Mean Depth）

轴线平均深度指从每条轴线到其他所有轴线的拓扑深度的算术平均值。

Axial mean depth is defined as the arithmetic mean of depths from each line to all others.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.108

轴线数量（Axial Node Count）

轴线数量指从某条轴线到其他轴线的路径中所穿过的轴线数量。

Axial node count is the number of axial lines encountered on the route from a line of origin to all others.

Turner, A. (2004), DepthMap4: A Researcher's Handbook, UCL. pp.29

轴线点深度或轴线步长深度（Axial Point Depth, or Axial Step Depth）

轴线点（或步长）深度指每条轴线距离起始轴线的拓扑深度或转弯次数。

Axial point/step depth measures how far each line is away from the root line (or lines) in terms of the number of changes of line.

来源：

Turner, A. (2004), DepthMap4: A Researcher's Handbook, UCL. pp.25

轴线半径（Axial Radius）

轴线半径等价于从起始轴线到其他轴线的拓扑深度，用于选择某个起始轴线周围的轴线（包括起始轴线本身），作为分析的子系统。

Axial radius, equal to a topological step from a root line to others, acts a tool of selecting sub-systems to be analysed around that root line.

来源：

Turner, A. (2004), DepthMap4: A Researcher's Handbook, UCL. pp.15

轴线半径-半径（Axial Radius-radius）

轴线半径-半径指某个拓扑半径下，分析的整体效应得以最大程度的发挥，同时并不导致边缘效应。它等价于轴线平均深度。

Axial radius-radius is the radius at which the globality of the analysis is maximised without inducing edge effect. This is equal to the value of axial mean depth.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.120-121

轴线半径-半径中心（Axial Radius-radius Core）

轴线半径-半径中心指在半径-半径下，整合度位居前列的一些轴线所构成的中心。
Axial radius-radius core is constituted by the most integrating lines at the radius-radius.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.263, 267

轴线环状度（Axial Ringiness）

轴线环状度用于评估轴线图中的环状空间特征。其计算公式为（2L-5）/I，L 为轴线数量，I 为环形空间或街坊块数量。
Axial ringiness is a measure of rings in axial map, and it is computed by the equation of (2L-5)/I, where L is the number of axial lines and I is the number of islands or rings.
来源：
Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.104

轴线空间（Axial Space）

轴线空间表示从某点状空间沿一维方向尽可能地延伸的线性空间。
Axial space represents the maximum extension of a space as a point in one dimension.
来源：
Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.96

轴线协同度（Axial Synergy）

轴线协同度指半径 3 的整合度与半径 n 的整合度之间的相关程度。这是度量局部空间情况在多大程度上可用于良好提示整体空间结构。
Axial synergy, defined as the correlation between radius-3 and radius-n integration, measures the extent to which local grid conditions provide a good indicator of the global structure of an axial map.
来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.99-101

轴线总深度（Axial Total Depth）

轴线总深度指从起始轴线到其他所有轴线的拓扑深度之和，其深度可理解为从起始轴线到目的地轴线的最少转弯次数。

Axial total depth is the sum of depths from a root line to all others, depth meaning the fewest number of changes o lines intervening between the root and another.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.108

轴线分离（Axial Unlink）

轴线分离使得我们可以把轴线图中两条相交的轴线分离开来，在现实中这两条轴线代表彼此不直接相连的空间，如穿越地面道路的高架路。

Axial unlink allows us to unlink two axial lines intersecting on the axial map, but not being directly connected in reality, such as a road bridge crossing the road.

来源：

Turner, A. (2004), DepthMap4: A Researcher's Handbook, UCL. pp.33-34

轴线性（Axiality）

轴线性指从某点状空间尽可能地沿轴线延伸，形成一条直线。参见延伸的概念。

Axiality means the maximum global or axial extension of space, as a point, in a straight line. See stringiness.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.91

Axman 软件（Axman）

Axman 软件是分析城市和市内空间的轴线图的应用工具。Axman 软件将轴线转化

为点，将轴线之间的交点转化为连接，形成关系分析图。该软件由伦敦大学学院的尼克·道尔顿编写。

Axman is an application used to analyse axial maps of urban and interior space. Axman constructs a graph of the configuration of axial lines, interpreting the lines as the graph's nodes and connections between lines as the edges of the graph. Created by Nick Dalton at University College London.

来源：

Dalton, N., (1988). Axman. UCL, London.

Axwoman 软件（Axwoman）

Axwoman 软件基于轴线和自然街道展开空间分析。该软件由瑞典耶夫勒大学江斌教授编写。

Axwoman supports space syntax analysis based on both axial lines and natural streets. Created by Bin Jiang at University of Gävle.

来源：

Jiang, B. (2015) Axwoman 6.3 Extension for ArcGIS 10.2, University of Gävle. P1.

背景网络（Background Network）

背景网络是普通城市理论概念的一部分，指普通城市除了包括各个不同尺度中心彼此相连构成的前景网络之外，还包括以住宅为主的背景网络。背景网络在不同文化中以不同的空间方式表达，取决于文化如何规范人们共同出现在同一个空间的方式，例如市民与外来人、或男人与女人在空间中的分布，使之空间结构化。参考普通城市。

The Background network is part of a theoretical conception of a generic city as being comprised of a foreground network of linked centres at all scales set into a background network of residential space. The background network is said to vary across residential of spatial areas whole spatial cultures, depending on the way in which that culture seeks to restrain and structure co-presence between, say, inhabitants and strangers or men and women. See: Generic city.

来源：

Hillier, B. (2001), A theory of the city as object: or, how spatial laws

mediate the social construction of urban psace, In: Proceedings of 3rd International Space Syntax Symposium. pp. 02.21;
Hillier, B. & Netto, V. (2002), Society seen through the prism of space: outline of a theory of society and space, Urban Design International 7, 181-203. pp. 182;
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK.pp vi.

邦斯柏瑞（Barnsbury）

邦斯柏瑞是内伦敦北部的城市地区，这是早期空间句法研究的经典案例。
Barnsbury is an urban area in inner north London that has been extensively investigated in the early research using space syntax.
来源：
Hillier, B., Burdett, R., Peponis, J., Penn, A. (1987), Creating Life: Or, Does Architecture Determine Anything? Architecture et Comportement/Architecture and Behaviour , 3 (3) 233 - 250. pp.240

珠状（Beadiness）

珠状特指二维延展的空间。
Beadiness refers to the extension of space in two dimensions.
来源：
Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.91

串珠型（Beady Ring）

串珠型是法国沃克吕兹省所有城市风情小镇中共同的空间形态。每个小镇都有不规则的环形街道，其宽窄不一，看似像一串珠子。早期的空间句法研究发现，这不是来自有意识的设计，而来自小规模的历时性更新和改造。

The form of beady ring is an invariant found among all ‘urban hamlets’ of the Vaucluse region of Provence, France. Each was organised around an irregular ring street with an array of wide and narrow spaces, which seemed like beads on string. Early space syntax research observed that it had

arisen not by conscious design but by some accumulative process of small-scale decisions taken over time.
来源：
Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.10, 59-61

之间的中心性（Betweenness）

之间的中心性是度量街道段位于两两随机最短路径上的概率。数学上，这与空间句法中穿行度具有相同的效果。
Betweenness is a measure for quantifying the probability that a node falls on a randomly selected shortest path linking any pair of nodes. Mathematically it is the same as choice.
来源：
Freeman, L. (1977) A set of measures of centrality based on betweenness, Sociometry 40, 35-41. pp. 37;
Hillier , B. & Iida, S. (2005), Network and psychological effects in urban movement, In: A.G. Cohn and D.M. Mark (Eds.): COSIT 2005, LNCS 3693, pp. 475 - 490. pp. 483

波诺诺（Bororo）

波诺诺是列夫·斯特劳斯所描述的村庄，在希利尔和汉斯的《空间的社会逻辑》一书中得以重新审视。这是重点研究凸空间和轴线空间的案例。
Bororo is a village described by Levi-Strauss and re-exmained by Hillier and Hanson in the book of the Social Logic of Space. It is an example in which both convex and axial spaces had been heavily invested.
来源：
Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.93

b 型空间（b-Space or b Type Space）

b 型空间指连接数目大于 1 的空间，且该空间所在的子系统中连接数量比空间数量少一个，即该子系统是拓扑树。该空间本身不是死胡同空间，然而该空间必须与至少一个死胡同空间直接相连。

b-type space is space with more than one link but which forms part of a connected sub-system in which the number of links is one less than the number of spaces, that is, a system which has the topological form of a tree. Such space cannot in itself be dead end space, but must be on the way to (and back from) at least one dead end space.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.250

c 型空间（c Space or c Type Space）

c 型空间具有 1 个以上的连接，它可以形成某个子系统，其中既没有 a 空间，也没有 b 空间，而是空间个数与连接个数一样。其实，这意味 c 型空间一定位于一个环上（虽然不是所有位于环上的空间都是 c 型空间），因此把某个 c 型空间的连接切断，环就自动变成了树。

c-type space is one with more than one link which forms part of a connected sub-system which contains neither type a nor type b spaces, and in which there are exactly the same number of links as spaces. It in fact means c-type space must lie on a single ring (though not all spaces on the ring will be c-type) so that cutting a link to a c-type space will automatically reduce the ring to one or more trees.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.250

载体空间（Carrier Space）

载体空间特指某个较大的空间包含或围绕某个相对较小的物体，而该物体暂时占据了有限而连续的空间。

Carrier space means a larger space contains or surrounds a relatively smaller object that occupies, however temporarily, a finite and continuous region of space.

来源：
Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.66-67

元胞自动机（Cellular Automata）

元胞自动机是特定形状的网格中一组着色的细胞单元，根据一系列的规则，于相邻细胞单元的情况，根据需要多次反复迭代，在一段离散时间内演变。
Cellular automata is a collection of coloured cells on a grid of specified shape that evolved through a number of discrete time steps according to a set up rules, applied iteratively for as many time steps as desired, based on the states of neighbouring cells.
来源：
Wolfram, S. (2000) A New Kind of Science. Champaign, IL: Wolfram Media, pp. 48.

中心极限定律（Central Limit Theorem）

中心极限定律指大量随机的独立变量积累起来，彼此的平均值和变量为有限的，那么其分布近似于正态分布。
Central limit theorem means that a sufficiently large number of independent random variables, each with finite mean and variable, will be approximately normally distributed.
来源：
Feller, W. (1971) An Introduction to Probability Theory and Its Applications, Vol.2, 3rd ed. New York: Wiley

作为过程的中心性（Centrality as a Process）

作为过程的中心性是一种理论，认为城市中心源于长期的历史演变过程，伴随那些中心的选址与形成。该过程使得街道网络的组构影响交通模式，进而影响了用地的分布，形成了热闹的与安静的地区，构成了用地的选择过程，而根据整个城市空间结构的关系，这些地区又成为吸引点。该过程一方面是适应城市整体空间结构的良好组构，另一方面是适应局部网络的情况，开启中心的演变。演变的过程常常伴随较小街坊块的形成，使得局部街道网更为密集，可达性更高，出行更为有效。

Centrality as a process is a theory which proposes that urban centres are the outcome of a long-term historical process of the formation and location of centres. This process entails the configuration of the street network shaping movement flows patterns, which subsequently have an impact on the distribution of land uses to form the busier and quieter areas of the network and the subsequent influence this has on land use choices, and the development of the area as an attractor in the settlement layout as a whole. It both responds to well-defined configurational properties of the settlement layout, but also initiates changes in it by adapting the local grid conditions. The adaptation is typically local intensification of the street network by forming smaller scale urban blocks, which leads to more trip-efficient, permeable structures.
来源：
Hillier, B. (1999),Centrality as a process: accounting for attraction inequalities in deformed grids. Urban Design International , 4 (3/4) 107 - 127. pp.107

中心性的悖论（Centrality Paradox）

中心性的悖论指某个地区的形态更为整合（即更接近圆形），那么该地区内部最为整合的部分与其外界就更为隔离，其外界包括该地区邻近的聚集区。简而言之，内部最大限度的整合，将会使得外部最大限度的隔离。
Centrality paradox means that the more integrating the form - that is the more it approximates the circular form - then the more its most integrated internal zone is maximally segregated from the external world, and, by definition, from any other aggregates that are to be found in the vicinity of the system. Put is simple. Maximising internal integration also maximises external segregation.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.266

中心性原则（Centrality Principle）

对于线性空间，阻碍物越靠近该空间的中心地段，该空间将获得越多的拓扑深度，即整合度降低；而越靠近中心地段，该空间就越为整合。

Blocks placed more centrally on a line create more depth gain (that is reduce integration) than peripherally placed blocks, and vice versa for the creation of open space by block removal.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK.pp. 282

选择度（Choice）

选择度是计算某条轴线或某条街道段位于从所有空间到其他所有的空间的最短路径的概率或次数。该计算过程既可包括系统中所有要素，又可只涵盖特定半径内的元素。参见之间的中心性和线段角度选择度。
Choice measures how likely an axial line or a street segment it is to be passed through on all shortest routes from all spaces to all other spaces in the entire system or within a predetermined distance (radius) from each segment. See Betweenness and Segment Angular Choice.
来源：
Hillier, B., Burdett, R., Peponis, J., Penn, A. (1987), Creating Life: Or, Does Architecture Determine Anything? Architecture et Comportement/Architecture and Behaviour, 3 (3) 233 - 250. pp.237

作为自组织系统的城市（Cities as Self-organising Systems）

作为自组织系统的城市理论包括两部分：一方面指空间法则塑造城市的机制，即城市空间模式与认知、社会、经济因素的典型关联机制；另一方面， 城市空间模式历时性地突现出来，进而影响到交通、用地模式，并伴随反馈和倍增效应，形成了普遍的空间形态，即城市中各种尺度的中心彼此相连构成前景网络，并根植于主要是住宅功能的背景网络之中。参见普通城市。
A theory of cities as self-organising systems has two parts: on the one hand, a theory of how cities are shaped by spatial laws. In this theory characteristically urban space patterns are associated with cognitive as well as to social and economic factors; on the other hand, a theory of how the emergent patterns of urban space over time shape movement, and through this shape land use patterns, leading through feedback and multiplier effects, to the generic form of the city as a foreground network of linked centres at all scales set into a background network of largely residential space. See: Generic city.

来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp. vi

共同感知（Co-awareness）

共同感知指一群人使用空间，可感知到彼此的存在。
Co-awareness means a group of people using spaces are aware of each other.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp. 141

组合爆发（Combinatorial Explosion）

组合爆发指从理论上研究建筑物组合方式时，可发现无数的组合可能性。
Combinatorial explosion means a large number of combinatorial variety found in investigating all theoretical architectural possibilities.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp. 216-8

紧凑性与线性（Compactness/Linearity）

紧凑性指在空间连续的布局之中，最小化所有空间之间的实际距离（米制或模数），而线性则指最小化视线的整合程度。
Compactness is to minimise metric or modular distance from all spaces to all others in any contiguous arrangement, and linearity it to minimise visual integration of the contiguous arrangement.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp. 267-269

凹空间（Concave Space）

凹空间中存在两点之间的连线超出了凹空间的边界（参见凸空间）。

Convave space is one in which a line drawn from two points goes outside the space. See Convex Space.
来源：
Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.98

组构（Configuration）

按空间句法的术语说，空间组构指考虑到其他关联的一些关联。更为确切地说，组构是空间局部（如城市道路）之间一系列的关联，且依赖于整个系统的结构。该概念强调复杂系统的整体，而非其局部。
In space syntax terms, spatial configuration means the relations taking into account of other relations, or more precisely, a set of relationships among parts (say, urban streets), all of which interdepend in an overall structure of some kinds. This concept addresses the whole of a complex rather than its parts.
来源：
Hillier, B., Hanson, J., and Graham, H. (1987), Ideas are in things: an application of the space syntax method to discovering house genotypes. Environment and Planning B: Planning and Design, v14, 363-385. pp. 363; Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. p1, p23

组构的非均等性（Configurational Inequalities）

组构的非均等性指一组空间的各自整合程度不一样，通过出行经济的机制，形成了中心和次中心。参见出行经济。
Configurational inequalities refers to the differences in integration values in a set of spaces, which generates a pattern of centres and sub-centres through the operation of the movement economy. See: Movement Economy.
来源：
Hillier, B. (1999),Centrality as a process: accounting for attraction inequalities in deformed grids. Urban Design International , 4 (3/4) 107 - 127. pp.126; Hillier, B. (2001) pp. 02.2

组构的持久性（Configurational Persistence）

组构的持久性指所有元素与其它元素之间的复杂关联在物质空间中得以固化，从而较为持久地存在下去。这种持久性具有我们设想以及眼见为实的客观性。

Configurational persistence means the complex relations between all elements and all the others that manifest themselves in space and persist through time. This kind of configurational persistence has the quite objective effect that the thing we think and see.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp. 308-310

连接度（Connectivity）

连接度指所有直接连通到起始空间的其他空间数量。

Connectivity measures the number of spaces immediately connecting a space of origin.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.103

保持过程（Conservative Process）

城市系统的保持过程是通过限制了共同在场，实现文化模式的稳定性，并不断地再生。这一般与城市的住居地区有关。

The conservative process in urban systems restricts co-presence in order to conserve or reproduce culture patterns. It typically refers to residential areas in cities

来源：

Hillier, B. & Netto, V. (2002), Society seen through the prism of space: outline of a theory of society and space, Urban Design International 7, 181-203. pp. 182; Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp. 201

构成空间（Constituted Space）

构成空间指直接与建筑物相邻或相通的空间。
Constituted space is space that is directly adjacent and/or permeable to building(s).
来源：
Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.105-6

连续性法则（Contiguity Principle）

相对于非连续性地设置障碍物，连续性地设置障碍物可导致更多的拓扑深度；反之亦然。
Contiguous blocks create more depth gain than non-contiguous blocks, and vic and versa for space.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.282

连续线（Continuity-lines）

连续线代表感知上近似直线的路径，观察者只能沿该连续线行走，没有其他任何选择。
The continuity lines represent the quasi-linear paths perceived by an observer as a continuous line of movement, as no other choice of movement is offered.
来源：
Figueiredo, L. & Amorim, L. (2005), 'Continuity lines in the axial system', in A Van Nes (ed), 5th International Space Syntax Symposium, TU Delft, Faculty of Architecture, Section of Urban Renewal and Management, Delft, pp. 161-174.pp. 163.

控制度（Control）

控制度是度量某空间的比邻空间可进入该空间的难易程度。某个空间有 k 个与之相邻的空间，那么与之相邻的空间都获得 1/k 的值。对于每个空间，所获得的值之和为控制度。控制度大于 1 表示强控制，小于 1 表示弱控制。典型案例是医院走廊，与之相连的是单独的诊室，其控制度较强。

Control measures what degree of choice each space represent for its immediate neighbours as a space to move to. Each space has a certain number k of immediate neighbours. Each space therefore gives to each of its immediate neighbours 1/k, and these are then summed for each receiving space to give the control values of that space. Spaces which have a control value greater than 1 will have strong control, those below 1 will be weak control spaces. A typical example is a hospital corridor, which is connected to many one-connected offices.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.109;

Hillier, B., Burdett, R., Peponis, J., Penn, A. (1987), Creating Life: Or, Does Architecture Determine Anything? Architecture et Comportement/Architecture and Behaviour , 3 (3) 233 - 250. pp.237.

逆向交互图（Converse Interface Map）

逆向交互图指翻过来的互动图，其中建筑物或其边界被表达为点，凸空间为圆圈，而彼此相邻而不联通的关系则表示为线；于是，这些线表示建筑物或边界与凸空间之间的墙。

Converse interface map is the converse of the interface map, in which each building or boundary is still represented by a dot and each convex space by a circle, but each line is drawn only where there is a relation of adjacency and impermeability. Thus, the lines linking buildings and boundaries to convex spaces will represent blank walls.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.105

凸空间比邻关系图（Convex Adjacency Graph）

凸空间比邻关系图称之为“y—图”，这是将凸空间图转换为关系图，其中空间被表示为小圆圈，而空间相邻的连通则被表示为线。

Convex adjacency graph, also called the y-map, involves the transformation of the convex map into a graph in which convex spaces are represented by small circles and permeable adjacencies by lines.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.100

凸空间交互图（Convex Interface Map）

凸空间交互图中，每个凸空间被表示为圆圈，每栋建筑或围合空间为点；当建筑物或边界与凸空间相邻相通时，圆圈和点之间就连一条线。

Convex interface map is a diagram in which each convex space is represented by a circle and each building or bounded space in the system by a dot, and the dotes are connected to the circles wherever there is a relation of both adjacency and direct permeability from the buildings or boundaries to the convex spaces.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.104-5

凸空间图（Convex Map）

凸空间图是采用最少的、最大的凸空间去遍及整个系统。

Convex map is a least set of fattest spaces that covers the system.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.92

凸空间（Convex Space）

凸空间中任意两点之间的连线不会穿越该空间的边界。

Convex space is one in which no straight line drawn between any two points goes outside the space.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.97-8

凸空间分割（Convex Space Breakup）

凸空间分割指将连续的开放空间分割为彼此分离的凸空间。先识别出最大的凸空间，并绘制之；然而再识别并绘制第二大的凸空间，直到所有的凸空间被遍及。如果肉眼难以识别凸空间的大小差别，可采用如下方法去识别之：首先，采用圈形模板，每次去识别开放空间结构中最大的圆，并依次画出；其次，尽量地延伸圆的边界，而不破坏其凸空间特性，也不影响其他凸空间的大小。

Convex space breakup indicates a process of decomposing the continous structure of open space into separate covex spaces. Simply find the largest convex space and draw it in, then the next largest, and so on until all the space is accounted for. If visual distinctions are difficult, then the convex spaces may be defined in two stages: first, by using a circle template to find where the largest circles can be drawn in the structure of open space, and second, by expanding each circle to be as large as a space as possible without breaking the convexity rule and without reducing the fatness of any other space.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.98, 105

凸空间性（Convexity）

凸空间性指空间在二维上延伸的程度，其周边任意一点的切线都不会穿越该空间本身。

Convexity describes the degree to which any space can be extended in two dimensions. It means that no tangent drawn on the perimeter passes through the space at any point.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.91,97;

Hillier, B. , Hanson, J., and Peponis, J. (1987) , Syntactic Analysis of Settlements, Arch. & Comport/Arch. Behav., Vol.3, n.3, 217-231. pp.222.

共同在场（Co-presence）

空间句法理论认为，共同在场是指一群互不认识的人，或一群熟人，同时出现在他们共同分享使用的空间。共同在场的人们并不代表一个社区，这只是形成社区的基本必要条件，也许条件成熟之后，今后有可能形成社区。

Space syntax theory defines co-presence as the group of people who may not know each other, or even acknowledge each other, who appear in spaces that they share and use. Co-present people are not a community, but they are said to be the raw material for the creation of a community, which may in due course become activated, and can be activated if it becomes necessary.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.141

相关系数（Correlation coefficient）

空间句法中常用的相关系数是皮尔森的 R，用于度量两个变量之间线性关系的强度与趋势，这依据协方差与标准差之间的除法关系。

Correlation coefficient usually deployed in the space syntax analysis is Pearson’s r, a measure of the strength and direction of the linear relationship between two variables that is defined in terms of the sample covariance and the variables divided by their standard deviation.

来源：

Spiegel, M. (1992) “Correlation Theory.” Ch14 in Theory and Problems of Probability and Statistics, 2nd ed. New York: McGraw-Hill, pp. 294-323.

凸空间分析（Covex Analysis）

凸空间分析指空间布局被表达为凸空间图，并进行分析。凸空间可转换为点，它们之间的连接转换为线。为了生成凸空间相邻关系图，将圆圈方式放入凸空间之中；当两两凸空间有彼此相邻的边（而非只是通过顶点相连），就将圆圈连接起来。

Convex analysis is a way of analysing spatial layout represented by convex map. The Convex space can be transformed into a diagram in which convex spaces are represented by points and relations between them by lines joining points. To make a convex adjacency graph, simply place a circle

inside each convex space, then join these circles by lines whenever the convex spaces share a face or prt of a face (but not when they only share a vertex).
来源：
Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.100-114

积累的等视域（Cummulative Isovist）

积累的等视域指，当智能体在序列行走时，以360度视角去观看，所能看到的建筑物区域的平均值。该变量使得智能体可以优化其识路探索能力。
Cummulative isovist is the mean fraction of building area that could have been viewed by an agent with 360 degree vision during its visit. This variable gives an idea of how optimises an agent is in terms of explorative ability.
来源：
Turner, A. and Penn, A. (2002) Encoding Natural Movement as an Agent-based System: an Investigation into Human Pedestrian Behaviour in the Built Environment. Environment and Planning B, 29(4), 473-490. pp.483-484.

拓扑关系的衰退（Decay, of a Justified Graph）

拓扑关系的衰退指拓扑深度的递减，计量从起始轴线到每条目的地轴线的拓扑深度的倒数之和，其中拓扑深度可赋予指数权重。
Decay of a justified graph is expressed by the function of depth decay, meaning the sum of the reciprocal of depth from the root node to each destination, where the depth can be weighted by a power function.
来源：
Dalton, R. C. & Dalton, N. S. (2007) Applying Depth Decay Functions to Apace Syntax Network Graphs. Proceedings of 6th International Space Syntax Symposium, Istanbul. Pp.089-01-14

变形网格（Deformed Grid）

变形网络指主要轴线相交角度在零度与九十度之间，与正交网络相对比。

A deformed grid is one in which all major lines intersect at the whole range of angles between zero and ninety degrees.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.276

变形车轮（Deformed Wheel）

变形车轮是一种半网格：车轴中心是整合度高的轴线；某些整合度较高的轴线从中心向边缘延伸，形成辐条；某些边缘的轴线也较为整合，形成空间轮圈。这种结构常常形成了主要的空间结构，而辐条（从中心到边界的联系街道）之间的楔形部分的整合度较低，主要是住宅区。
A deformed wheel is a semigrid, or hub, of lines near the centre, strong integrators which link this semi-grid to the edges, like spokes, and some edge lines are also integrated, forming a spatial rim. This structure is usually the main public space structure, while less integrated residential areas form in the interstices form by the wheel.
来源：
Hillier, B. (1989) The Architecture of the Urban Object, Ekistics, 334/335, 5-21. pp.10

深度（Depth）

深度指从某个空间到另外一个空间需要穿越的空间数量。
Depth exists wherever it is necessary to go through intervening spaces to get from one space to another.
来源：
Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.108

Depthmap 软件（Depthmap）

DepthMap 软件是单独的平台，运用于一系列的空间网络分析，以此理解建成环境中的社会运行机制。该软件可用于不同尺度，从建筑物、较小的城市片区，直到整个城市或国家。在每个尺度上，该软件可生成开放空间要素的图示，通过某

种关联（如彼此可视或彼此重叠）将空间要素联系起来，并进行关系图分析，为了获得具有社会或体验意义的空间变量数值。

DepthMap is a single software platform to perform a set of spatial network analyses designed to understand social processes within the built environment. It works at a variety of scales from building through small urban to whole cities or states. At each scale, the aim of the software is to produce a map of open space elements, connect them via some relationship (for example, intervisibility or overlap) and then perform graph analysis of the resulting network. The objective of the analysis is to derive variables which may have social or experiential significance.

来源：

Turner, A. (2004), DepthMap4: A Researcher's Handbook, UCL. pp.1-4

描述性回溯（Descriptive Retrieval）

描述性回溯指人们从真实世界的关系模式中回溯抽象出来信息。

Descriptive retrieval means that human beings retrieve abstract information from patterns of relations in the real world.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.40-3

作为同步协同的描述性回溯（Descriptive Retrieval as Synchronisation）

描述性回溯来自于真实世界中所发生的事件，并独立于事件过程之中个体的认知或行为。这发生在两个层面上。在局部层面上，各个部分聚集为一个整体，抽象回溯本身与构成过程的事件都处于相同的尺度之上；而在较高的格式塔整体层面上，所有分散的行为需要彼此协同，超越个体事件本身，共同形成一个单独的场景。正是这个更高秩序的协同，使得我们无意识地认识到了某种同步协调，这是由于在系统建构的局部规则的一致性之上，还存在一个整体性的层面，需要向我们自身完全而清晰地展示其全貌品质。

Descriptive retrieval, arising from what happens in the real world independent of the cognition or actions of the agents of the process, exists at two levels: at the local level of putting parts into a whole, the abstraction retrieved is at the same scale as the events that make

up the process; at the upper level of the whole gestalt, it is at a higher level than the individual events that make the form, and somehow co-ordinates all of these separate actions into a single scheme. It is this higher order co-ordination that we can think of as a kind of synchronisation, since over and above the consistency in the local rule which put the system together there is a clear 'all at once' quality to how we read the system overall.

来源：

Hillier, B. (2003), The Knowledge That Shapes The City: The Huamn City Beneath The Social City. In: the Proceedings of 4th International Space Syntax Symposium,01.1-01.20. pp.01.10

钻石关系图（Diamond Graph）

钻石关系图指某种特定的拓扑关系图，其中 k 个空间位于拓扑深度均值的位置，k/2 个分布在那个位置的上下层，k/4 个又继续分布在其上下层，如此类推，直到一个空间位于最浅的位置（即最低点），以及另一个位于最深的位置。参见 D 值。

Diamond graph simply means a justified map in which there are k spaces at mean depth level, k/2 at one level above and below, k/4 at two levels above and below, and so on until there is one space at the shallowest (the root) and deepest points.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.111-112

可言表性（Discursivity）

可言表性指我们知道如何去谈论某个事物。空间句法使用这个词去强调建筑中的空间或形态组构难以用言语表达。

Discursivity means that we know how to talk about it. Space syntax uses this term to address the difficulty in talking about the spatial or formal configuration in architecture.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.27

分布性（Distributedness）

分布性指一系列平等的个体单元的布局所形成某种属性，而非诸如强加于这些个体单元之上的单一边界属性。

Distributedness means the properties purely generated by the arrangement of a number of equal, individual cells rather than, for example, by the superimpostion of a single superordinate cell on those cells.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.11-12

非城镇空间（Dis-urban space）

非城镇空间源于空间局部的组构较弱，未形成结构，使得构成经济出行的主要因素消失。非城镇空间中难以找到城镇中普遍的空间品质，这体现为建筑物与公共空间之间的联系缺失、不同尺度的交通出行无关联以及居民与陌生人交互界面缺位。

The dis-urban space arises from a poorly structured local configuration of space as a consequence of which the main elements of the movement economy are lost. It is intened to convey the reverse of the urban spatial techniques we have identified: the breaking of the relation between buildings and public spaces; the breaking of the relation between scales of movement; and the breaking of the interface between inhabitant and stranger.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.131-134

等视域偏移度（Drift -Isovist）

等视域偏移度指从生成等视域的起点到等视域的重心之间的距离。该变量表达了视域空间的中心性以及沿道路出行的方向感。

Drift-isvoist is defined as the distance in metres between the location from which the isovist is generated and the centre of gravity of the isovist. It will tend to a minimum value in the centres of spaces and along the centre-lines of roads.

来源：
Dalton, C. R. & Dalton, N. (2001), OmniVista: An Application for Isovist Field and Path Analysis, In: Proceedings of 3rd International Space Syntax Symposium Atlanta, 25.1-10. pp.25.9

d 型空间（d-space or d Type Space）

d 型空间具有两个以上的连接。它所在的子系统不包含 a 或 b 型空间；至少包含两个环，且至少在一点相交。因此，d 型空间必然位于两个以上的环上。
D-type space is one with more than two links and which forms part of systems which contain neither a- nor b-type spaces, and which therefore must contain at least two rings which have at least one space in common. Such space must lie on more than one ring.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.250-1

双重结构（Dual Structure）

双重结构指城市既有局部单元结构，其源于从所有空间到其他空间的米制距离，也有不同尺度下联系各个局部单元的网络，超越局部性，体现了城市的整体特征。
Dual structure means cities have a patchwork of local areas captured by metric distance from all points to all others, as well as the structures overcoming locality and linking the urban patchwork into a whole at different scales.
来源：
Hillier, B., Turner, A., Yang, T., Park, H-T. (2007, 2010) Metric and topo-geometric properties of urban street networks: some convergences, divergences and new results. The Journal of Space Syntax, V(1) 2, 258-279. pp.259

社会与空间系统的二元论(Duality of a Socio-spatial System)

社会与空间系统的二元性指从局部到整体的现象，即经由个人所控制的领域，形成整体秩序，以及从整体到局部的系统，即超越个人的领域，表现为某种边界和空间构成的系统，具备更多地集体或公共属性。

Duality of a socio-spatial system comprises a global order constructed from the domains controlled by individuals, called a local-to-global phenomenon, as well as a global-to-local system existing over and above the domains of individuals, and expressing itself in some systems of boundaries and spaces which have a more collective or public nature.
来源：
Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp. 259-160

D 值（D-value）

D 值指钻石型关系图中起始点（即拓扑关系分析图中最低点）的相对非对称值。这也钻石几何形状本身没有任何关联。这仅仅指拓扑关系分析图有 k 个空间位于拓扑深度均值的位置，k/2 个分布在那个位置的上下层，k/4 个又继续分布在其上下层，如此类推，直到一个空间位于最浅的位置（即最低点），以及另一个位于最深的位置。参见钻石关系图。
D-value is the RA value for the root - the space at the bottom of a justified map - of a diamond-shaped pattern. This has nothing to do with geometric shape. It simply means a justified map in which there are k spaces at mean depth level, k/2 at one level above and below, k/4 at two levels above and below, and so on until there is one space at the shallowest (the root) and deepest points. See Diamond Graph.
来源：
Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.111-112

边界效应（Edge Effect）

边界效应指轴线模型的边界部分不相称地隔离，这源于该部分的轴线受到边界的限制未延伸出去。参见：解决边界效应的半径-半径工具。
The edge effect describes the fact that the edge of axial models appears disproportionately segregated due to the fact that streets on the edge of the map are not connected onwards. See: Radius-Radius for solution to the edge effect.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. p121

再现图示（Embodied Diagrams）

再现图示指人们生存的体验在日常空间环境中得以表现出来，获得与之相关的一系列意义，以图示的方式再现出来。

Embodied diagrams are defined as the diagrams that are imbued with a manifold set of meanings pertaining to the experience of being embodied within an everyday spatial context.

来源：

Dalton, C. R., and Christoph, H. (2007) Understanding Space: the nascent synthesis of cognition and the syntax of spatial morphologies. In: Space Syntax and Spatial Cognition - Proceedings of the Workshop, 24 September - 28 September 2006, Bremen, 1-10. pp.5

嵌入度（EMD (Embeddedness)）

嵌入度指随半径的增加，某个空间嵌入其周边的程度。对于轴线图或线段图，该变量指轴线或线段数量的变化率，用于研究城市空间结构在不同尺度上的组织方式，从某条街道与相邻街道的连接，直到所有街道构成城市整体的结构方式。

Embeddedness measures the degree to which a space is spatially embedded into the contexts with increasing radius. It is defined as the rate of change in node count, based on either axial or segment representations. It seeks to investigate how the spatial structure of a city is organised at different scales, varying from connecting one street with its immediately surrounding streets to aggregating all the streets into a well-structured city as a whole.

来源：

Yang, T. & Hillier, B. (2007), The fuzzy boundary: the spatial definition of urban areas, In: the Proceedings of 6th International Space Syntax Symposium, 091-16. pp.091-08;

Yang, T. & Hillier, B. (2012),The impact of spatial parameters on spatial structuring, In: the Proceedings of 8th International Space Syntax Symposium, 8019:1-23. pp.1-2.

涌现（Emergence）

空间句法中的涌现指较大尺度的模式源于局部层面上不同类型的物质空间（或社会经济）的历时性变化。

Emergence in space syntax is defined as the larger scale pattern arising from different kinds of local physical intervention.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.244-5

涌现的空间模式（Emergent Spatial Pattern）

涌现的空间模式指整体的空间模式从局部的步步演变过程中涌现出来。
Emergent spatial pattern means the global pattern of space emerging from the localised step-by-step process.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. p245

围合（Enclosure）

围合的空间含义是好的空间是围合的空间，其广泛传播的社会内涵是围合代表空间边界确定的、较小规模的一群人，并排除其他不在该边界范围内的人，强调内部的熟识交往。
Enclosure spatially means good space was enclosed space, coupled to equally pervasive social idea that such enclosures had to be identified with well-defined, and preferably small, groups of people, and exclude others.
来源：
Hillier, B. (1988) Against Enclosure, in eds. N. Teymur & T. Markus, Rehumanizing Housing, Butterworths.pp. 63－88. 9

“围合—重复—等级”范式（Enclosure/Repetition/Hierarchy Paradigm）

这种设计范式采用了三种相互关联的原则，即围合、重复、以及等级，去建构布局，特别针对公共住房。每组较小尺度的局部围合空间，对应于较小的、可识别的社区，这将作为新住宅区的基本单元，以重复的方式，形成更大的围合布局，即组团中的组团，建构较大尺度的当地社区。

This 'design paradigm' adopts three linked principles, namely enclosure, repetition and hierarchy, to generate a layout, in particular for public housing. The small scale localised enclosures, each one corresponding to a small and identfiable community, are seen as the primary element of new housing area, and are organised in a repetition way to create the enclosure of enclosures, or cluster of clusters, to build local communities at the higher level.

来源：

Hillier, B. (1988) Against Enclosure, in eds. N. Teymur & T. Markus, Rehumanizing Housing, Butterworths.pp. 63－88. 9

熵（Entropy）

DepthMap 软件中，熵是根据从某个空间到其他空间的深度序列，而非深度本身，去计算空间区位的分布。如果很多空间距离某个空间较近，且深度分布是非对称的，熵值就低。如果深度是均称分布，熵值就高。该变量可反映空间布局中文化上重要的拓扑差异。其数学定义，详见 Hillier, B. et al (1987) pp. 365; Turner, A. (2001) pp.8.

Entropy in DepthMap is a measure of the distribution of locations of spaces in terms of their depth from a space rather than the depth itself. If many locations are close to a space, the depth from that space is assymetric, and the entropy is low. If the depth is more evenly distributed, the entropy is higher. This measure is able to express culturally significant topological differences among spatial layouts. For the mathematical definition, see Hillier, B. et al (1987) pp. 365; Turner, A. (2001) pp.8.

来源：

Hillier, B., Hanson, J., and Graham, H. (1987), Ideas are in things: an application of the space syntax method to discovering house genotypes, Environment and Planning B: Vol 14, 363-385. pp. 364-365;

Turner, A. (2004), DepthMap4: A Researcher's Handbook, UCL. pp. 15; Turner, A. (2001) Angular Analysis. In Proceedings of the 3rd International Symposium of Space Syntax, 1-13.pp.8

E 端点分隔（E 端点空间）(E-Partition (e-spaces))

E 端点分割指将物质形体上任意两两转折点连接起来，且不穿过任意墙，然后延伸之，并不超出整个空间的边界。

E-partition is obtained by joining any pair of discontinuities of shapes without crossing any a wall, and extending them without going outside the boundary of the whole space.
来源：
Peponis, J., Wineman, J., Rashid, M., Hong Kim, S., Barna, S., (1997) On the description of shape and spatial configuration inside buildings: convex partitions and their local properties, Environment and Planning B, Vol 24, 761-781. pp.769

体外视觉建构（EVA (Exosomatic Visual Architecture)）

体外视觉建构指计算程序包含环境中处理过的视觉信息，智能体可通过查询表格获得那些信息。在空间句法中，查询表格不仅包括物体位置，而且包含环境可达性的结构。
EVA is a computer architecture that contains pre-processed visual information about the environment which agents access via a lookup table. In space syntax, the lookup table encodes not only object locations, but also information about the accessibility structure of the environment.
来源：
Penn, A. & Turner, A. (2001) Space syntax based agent simulation. In: (Proceedings) 1st International Conference on Pedestrian and Evacuation Dynamics. : University of Duisburg, Germany,1-16. pp.1

延伸原则（Extension Principle）

我们所确定中心性的线性空间越长，阻碍该空间所获得的拓扑深度越大；反之亦然。
The longer the line on which we define centrality, the greater the depth gain from the block, and vice versa for space.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp. 282

最“胖”的凸空间（Fattest Convex Space）

最“胖”的凸空间指最大的凸空间，可在该空间内任意选择某个点作为圆心，绘制最大的圆，以此识别该凸空间。

Fattest convex space means the largest convex space, which can be roughly indentified by using a circle template to find where the largest circle can be drawn in any a point in the space.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.97-98

最少的转弯（Fewest Turn）

最少的转弯指沿某条路径方向变化最少的转弯次数。

Fewest turn is defined as the smallest number of changes of direction that have to be taken on a route.

来源：

Hillier , B. & Iida, S. (2005), Network and psychological effects in urban movement, In: A.G. Cohn and D.M. Mark (Eds.): COSIT 2005, LNCS 3693, pp. 475 - 490. pp481

前景网络（Foreground Network）

前景网络是最大化自然的共同在场，并在不同尺度将中心联系起来。参见：普通城市。

Foreground network is constituted by the spaces maximising natural co-presence and linking centres at al scales. See Generic City.

来源：

Hillier, B. (2001), A Theory of the City as Object: Or, how spatial laws mediate the social construction of urban space. In: Proceedings of 3rd International Space Syntax Symposium Atlanta 2001, 02.1-02.28. pp. 02.21;

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp vi.

形式-功能相互依存（Form-function Interdependence）

空间是物质形状，而功能是我们在其中的活动。我们获取的空间是一系列可能性，并通过在空间中展开的个人和集体活动来利用这些可能性。这体现为空间形态描述与空间使用之间的关系。

Space is a shape, and function is what we do in it. Space is given to us as a set of potentials, and wen exploit these potentials as individuals and collectivities in using space. There are relationships between the formal describability of space and how people use it.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp. 114-115

形式-功能问题（Form-function Problem）

普遍的形式-功能问题是指物种或其他自然形态如何良好地适应其功能。建筑中形式-功能问题指在多大程度上建筑物的形式与其社会功能之间存在规则关系。

A general form-function problem is how the forms of species or other natural forms are so well adapted to how they function. Form-function problem in architecture is defined as that in what sense there is a regular relation between the forms of buildings and the wyas in which the bits of society that inhabit them work.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp. 289, 295

形式-意义问题（Form-meaning Problem）

形式-意义问题是指建筑物的形式如何与其象征性意义关联。

A form-meaning problem is how the forms of buildings are associated with symbolic meanings.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.290

拓扑分数分析（Fractional Analysis）

拓扑分数分析指轴线图中两两轴线之间的拓扑深度根据其角度变化加以权重。
Fractional analysis is to analyse axial map where topological step between pairs of the lines are not 1, but weighted by angular change between them.
来源：
Dalton, N. (2001), Fractional Configurational Analysis and A Solution to the Manhattan Problem. In: Proceedings of 3rd International Space Syntax Symposium Atlant 2001, 26.01-26.13. pp.26.7

拓扑分数选择度（Fractional Choice）

拓扑分数选择度等价于角度选择度，即最小角度变化的路径穿越每个空间的概率。
Fractional choice is the same as angular choice, that is, the probability of the least angular route passing through each space.
来源：
Dalton, N. (2001), Fractional Configurational Analysis and A Solution to the Manhattan Problem. In: Proceedings of 3rd International Space Syntax Symposium Atlant 2001, 26.01-26.13. pp.26.8

拓扑分数深度（Fractional Depth）

拓扑分数深度等价于角度深度，即两两轴线之间的角度变化作为权重赋于拓扑深度计算。
Fractional depth is the same as angular depth, defined as the depth weighted by the angular change between pair of axial lines.
来源：
Dalton, N. (2001), Fractional Configurational Analysis and A Solution to the Manhattan Problem. In: Proceedings of 3rd International Space Syntax Symposium Atlant 2001, 26.01-26.13. pp.26.6

模糊边界（Fuzzy Boundaries）

模糊边界指依据内部空间结构建构及其与周边空间结构的关联，而形成了该地区的边界，以维持它与其他地区之间的可达性。该模糊边界源于不同尺度的空间非连续性，即空间组构在此发生较大变化，而并不依赖于该地区是否自给自足、其几何形态不一样或其边界较为清晰。

Fuzzy boundaries are defined as the boundaries arising from the way space is structured internally and how this relates to the external structure of space, and so maintaining inter-accessibility between areas. They are the manifestations of the spatial discontinuities -where the configurational relationships change significantly-varying at different scales, but do not depend on the area being either self-contained, geometrically differentiated, or having clear spatial limits.

来源：

Yang, T. & Hillier, B. (2007), The fuzzy boundary: the spatial definition of urban areas, In: the Proceedings of 6th International Space Syntax Symposium, 091-16. pp.091-02;

Hillier, B. (2009),Spatial sustainability in cities: organic patterns and sustainable forms. In: Koch, D. and Marcus, L. and Steen, J., (eds.) Proceedings of the 7th International Space Syntax Symposium. (pp. p. 1). Royal Institute of Technology (KTH): Stockholm, Sweden, k01.1-20. K01:3

伽玛图（Gamma Map）

伽马图是依据可达性，表达建筑物内部布局及其外界空间的拓扑关系图。每个内部空间或细分的空间可作为一个节点，表达为一个圆圈；而它与其他空间的可达性则为连接，表达为线；室外的空间也被看成是一个节点，表达为十字加圆圈。

Gamma map is defined as the graph representing the interior layout of a building as well as its external space in terms of permeability. Every interior space or subdivision of a space can be conceptualised as a point and represented as a circle, with its relations of permeability represented by lines linking it to others; the space outside considered as a point, and represented as a circle with a cross.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.147-9

观测点（Gate）

观测点指横穿街道的概念线，用于观测中记录交通流量。

Gate is a conceptual line across a street used for counting movement flows in observation studies.

来源：

Grajewski, T. (1992), Vaughan, L. (2001), Space Syntax Observation Manual, UCL. pp.3

观测数量（Gate count）

观测数量指某天的一段时间内，统计某个城市中特定采样地点的交通流量。
Gate count is used to establish the flows of people at sampled locations within the city over the course of a day.
来源：
Grajewski, T. (1992), Vaughan, L. (2001), Space Syntax Observation Manual, UCL. pp.3

建构过程（Generative Process）

建构过程特指不同类型的局部和整体空间综合体的形成，及其整合度模式的建构。
Generative process is defined as the creation of different types of local and global space complexes, and the construction of patterns of integration.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.253

普通城市（Generic city）

普通城市是一种理论假说，即跨越不同的文化，存在某种普遍化的城市，其空间和功能特征保持一致。这种理论的提出基于上百个世界不同地区的城市和聚落研究。所有的城市都有非常少的较长街道，而有大量较短街道；这构成了双重系统，包括不同形态的前景网络和背景网络。前景网络由较长的街道构成，具有更多接近直线的连接；而背景网络由较短的街道构成，具有更多直角的连接，体现了局部特征，且缺乏线形的连续性。从功能上看，前景网络呈现普遍化的形态，即不同尺度的中心彼此连接成为网络，使得交通尽可能地受到街道网络的影响，这是由微观经济活动所推动。背景网络大部分是住宅区，根据某种特定的文化去建构空间结构，规则出行交通，体现文化的独特性，常常表现为不同的几何特征，赋予城市整体空间以独特性。
The generic city is a theoretical proposition that there is a universal city with many spatial and functional invariants across cultures.

According to this theory (based on an extensive study of hundreds of cities and settlements ancient and modern around the world): all cities are comprised of a very small number of long lines and a very large number of short lines, and these constitute a dual system made up of foreground and background networks with different geometries: the foreground network, made up of longer lines and nearly straight connections and the background network, made up of shorter lines with more near right angle connections, and so more localised and with less linear continuity. Functionally, the foreground network takes a more or less universal form of a network of linked centres at different scales, and has emerged to maximise grid-induced movement, driven by micro-economic activity. The background network is largely residential, and is configured to restrain and structure movement in the image of a particular culture, and so tends to be culturally idiosyncratic, often expressed through a different geometry and this makes the city as a whole look spatially different.

来源：

Hillier, B. (2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.vi-vii.

Hillier, B. (2010), The Need for A Spatial Ontology for Societies, the Space Syntax Workshop at the European Archaeological Association Conference. The Hague, Netherlands.

普通性功能（Generic Function）

普遍性功能指人们最基本的空间使用之中所折射的空间意义，也就是空间占据和出行的事实。这限制了空间上的可行性，同时也使得所有建筑物具有共同点，即空间设计的需求。这构成了设计的可能性与建筑的实现之间的第一层过滤。

Generic function means the spatial implications of the most fundamental aspects of human use of space, that is, the fact of occupation and the fact of movement. It imposes restaints on what is spatially viable, and this is responsible for what all buildings have in common as spatial design. It is the first filter between the filed of possibility and architectual actuality.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.5-6

基因型（Genotype）

基因型指空间句法领域内空间形态之中的抽象原则。这是超越空间的概念。

Genotype is defined as abstract rules underlying spatial forms in the field of space syntax. It is a transpatial concept.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.12

基因型标示（Genotype Signature）

基因型标示指标示空间中统计上稳定的模式，或某个样本中最小的标示性特征，体现为拓扑关系图中的数值。

Genotype signature is defined as a statistically stable pattern of variation of labeled spaces, or a graph with the lowest distinction value of a given sample.

来源：

Bafna, S. (2001), Geometric Intuitions of Genotypes. In: Proceedings of 3rd International Space Syntax Symposium Atlanta 2001, 20.1-16. pp.20.9; Dalton, R. & Kirsan, C. (2005), Graph Isomorphism and Genotypical Houses. In: Proceedings of 5th Space Syntax Symposium, 15-28. pp.22

整体到局部的逻辑（Global-to-local Logic）

整体到局部的逻辑指为了体现某个特定区域中统一的意识和政治观点而在整体层面上进行的建构。该建构过程中的目标越明确，其外部就越容易被意识形态构成的结构所主导，而其内部空间也更容易被强制性的空间交易所模式所主导。

Global-to-local logic is defined as a global formation which projects both a unified ideology and a unified politics over a specific territory; and the more it acts to realise this aim, then the more the exterior is dominated by a system of ideologically defined structures, and the more the interiors are dominated by controlled transactions.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.21

整体到局部的现象（Global-to-local Phenomenon）

整体到局部的现象指某种社会现象，其独特的整体结构凌驾于日常的交流之上。
Global-to-local phenomenon is defined as a social phenomenon in which a distinct global structure is placed over and above the level of everyday interaction.
来源：
Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.20-1

拓扑关系图同构（Graph Isomorphism）

拓扑关系图同构指拓扑关系图不仅有相同数量的元素和拓扑深度之和，而且在关系图的每一层中都有相同的元素、以及相同的元素联系。
Graph isomorphism means that graphs share not only the same number of elements and the same total depth, but also the same number of elements at each level of the graphs and the same connections between elements.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.88

关系图匹配（Graph matching）

关系图匹配是为了识别任意两个较小的、标示的、有向的关系图之间的相似程度。这是计算从一个关系图转换为另一个关系图所需要的步骤总数。
Graph matching aims to detect how similar any pair of small, labelled, directed graphs are. It achieves this by calculating how many operations are needed to fully transform one graph into another.
来源：
Conroy-Dalton R and Kirsan C. (2008). Small graph matching and building genotypes. Environment and Planning B: Planning and Design, 35 (5): 810-830.

格网加密（Grid Intensification）

格网加密指缩小街坊块的大小，以减少空间网络中从所有点到其他所有点的平均距离。该现象常常出现在城市中心，其中商业活动繁荣，围绕街坊块的四周。参见：作为过程的中心性。

Grid intensification refers to the reduction of block size to reduce mean distance from all points to all others in a space network. It is typically found in city centres where commercial activity has grown to the extent it starts to spread around the block. See: Centrality as a process.

来源：

Hillier, B. (1999), Centrality as a process: accounting for attraction inequalities in deformed grids. Urban Design International , 4 (3/4) 107 - 127. pp.117

高层次的描述性回溯（High Level Descriptive Retrieval）

高层次的描述性回溯指在整个形态或格式塔的层面上实现描述性回溯，这是更高层面上的秩序协同，即某种同步。

High level descriptive retrieval means that description retrieval happens at the level of the whole form or 'gestalt', which is higher order co-ordination that we can think of as a kind of synchronisation.

来源：

Hillier, B. (2003) The knowledge that shapes the cities: the human city beneath the social city. In: (Proceedings) 4th International Space Syntax Symposium. : London, UK, 01.1-20. pp. 01.9-01.10

无意识的想当然（Ideas to Think Of）

无意识的想当然指一系列规则使得我们以确定的方式进行社会交流，如说话、聆听、参加晚宴、玩双陆棋等。这些规则隐含在行为习惯之中，因此我们对此毫无意识，或甚至不知道它们的存在。

Ideas to think of are a set of rules that allow us to act socially in well-defined ways, such as speaking, listening, attending a dinner party, playing backgammon, and so on. They are buried beneath habits of doing, so that we become unconscious of them, or even become unaware that they exist.

来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.194-196

有意识的思考（Ideas to Think With）

有意识的思考指我们有意识地学习抽象原则，并从本质上了解我们何时获得那些原则，以及何时运用那些知识。
Ideas to think with are the knowledge where we learn the abstract principles consciously and are primarily aware of the principles both when we acquire and when we use the knowledge.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.194-196

空间模式中不确定性（Indeterminacy in spatial pattern）

空间模式中不确定性指局部秩序的缺失从而导致了整体和局部模式都在变化。
Indeterminacy in spatial pattern means that without local order, both global and local patterns vary.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.277-278

不平等的基因型（Inequality genotype）

不平等的基因型指通过不同程度的空间整合性体现文化和社会关系。或者，这意味着根据文化和社会所对应的空间组构图中的平均深度（或整合度），对那些实用空间进行分类和排序。
Inequality genotype is defined as the way in which culture and social relations express themselves through the different degrees of spatial integration. Or, it means the ranking of programmatic labeled spaces according to their mean depth (or integration) of the nodes in the graph of the spatial configuration to which they correspond.
来源：

Hillier, B., Hanson, J., and Graham, H. (1987), Ideas are in things: an application of the space syntax method to discovering house genotypes, Environment and Planning B: Vol 14, 363-385. pp. 364;
Bafna, S. (2001), Geometric Intuitions of Genotypes. In: Proceedings of 3rd International Space Syntax Symposium Atlanta 2001, 20.1-16. pp. 20.2

整合与隔离（Integrated vs. Segregated）

整合与隔离指两种不同类型的空间布局，前者表示所有空间距离其他空间较近，而后者表示所有空间距离其他空间较远。
Integrated vs. segregated means two contrasting types of spatial layouts, the former indicating all spaces are close to all others, and the latter meaning all spaces are far aways from all others.
来源：
Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.16; Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.25-26

整合度（Integration）

整合度指系统中从任意空间到其他所有空间的标准化距离。一般而言，这是计算起始空间距离其他所有空间的远近程度，也可认为计算相对非对称性（或相对深度）。参见：线段角度整合度。
Integration is a normalised measure of distance from any a space of origin to all others in a system. In general, it calculates how close the origin space is to all other spaces, and can be seen as the measure of relative asymmetry (or relative depth). See: Segment angular integration.
来源：
Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.108-109

整合核心（Integration Core）

整合核心指前 10%、25%、或 50%最为整合的空间构成的模式。或者，如果系统大而复杂，这是指定数量的空间所形成的模式。

Integration core is a pattern made of the 10%, 25% or 50% most integrating spaces, or of a given number of spaces if the system is large and complex.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.115

可理解度（Intelligibility）

可理解性计算连接度与全局整合度之间的相关程度，即根据与某条轴线直接相交的轴线的数量（即直接可从该轴线上看到的其他轴线）作为可信的指标去度量该轴线在整个系统中的重要程度。 好的可理解性暗示整体结构可以从局部结构中解读出来。参见：轴线的可理解度。

Intelligibility, calculated by correlating connectivity with integration at the infinite radius, indexes the degree to which the number of immediate connections a line has - which can therefore be seen from that line - are a reliable guide to the importance of that line in the system as a whole. Good intelligibility implies that the whole can be read from the parts. See Axial Intelligibility

来源：

Hillier, B., Burdett, R., Peponis, J., Penn, A. (1987), Creating Life: Or, Does Architecture Determine Anything? Architecture et Comportement/Architecture and Behaviour , 3 (3) 233 - 250. pp.237

强度（Intensity）

强度是根据总体拓扑深度与熵的变化速率，来度量空间网络的相对非对称性。这是另一种标准化总深度的方法，也是为了在网络的特定出行范围内揭示交通效率。

Intensity measures the relatively asymmetry of a spatial network by calculating the rate of change of entropy relative to total depth. This is another way of normalising total depth. It also aims to capture the movement efficiency given the distance one must travel in the network.

来源：

Park, H., (2005) Before Integration: A Critical Review of Integration Measure in Space Syntax. In: Proceedings of 5th Space Syntax Symposium, 555-572. pp.564

相互可达性（Interaccessibility）

相互可达性指城市中心区内，沿最快且最方便的路径，从任意设施到达其他设施的可能性。这与城镇中心密切相关，促进所有设施之间的自然可达，使之最大化。
Interaccessbility means the possibility of getting from any facility to any other by a quick and easy route which stays within the town centre and which itself is lined with town centre facilities to maximize natural access to all facilities.
来源：
Hillier, B. (1999),Centrality as a process: accounting for attraction inequalities in deformed grids. Urban Design International , 4 (3/4) 107 - 127. pp.119

相互依存（Interdependence）

相互依存指城镇中心区内使用设施的方式。如果你前往使用其中一个设施，那么较容易去使用其它设施，使你也愿意使用其他设施。
Interdependence is the way of using facilities in town centres. If you come to use one, it is easy to use others.
来源：
Hillier, B. (1999),Centrality as a process: accounting for attraction inequalities in deformed grids. Urban Design International , 4 (3/4) 107 - 127. pp.119

界面（Interface）

界面指聚居地的公共空间，用于协调不同使用者之间的交流。
Interface is defined as public space of the settlement mediating the interaction among different types of users.
来源：
Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.17

断裂网格（Interrupted Grid）

断裂网格指所有主要线段（即那些构成轴线图的线段，并属于所有线的子集）要么通过街坊块的顶点呈现切线形式，要么以接近 90 度的方式被街坊块所打断。这意味着这些线要么是连续延伸而不改变方向，要么是 90 度转弯。

An interrupted grid is one in which all major lines, that is, the subset of the all-line map that constitutes the axial map, is either tangent to a vertex of a block or end on a block at close to ninety degrees. This means that lines either continue with on change in direction, or compel a ninety-degree change in direction.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.276

反转基因型（Inverted Genotype）

反转基因型是时空现实环境和活动中的非空间或信息结构。在社会层面上，人们活动的持续性不是来自生物基因产物，而来自于人工基因，即从现实中回溯的抽象描述，并由人们活动所建构。

Inverted genotype exists as a transpatial or informational structure within an environment of human spatio-temporal reality and activity. The consistency in human activity at the social level is not the product of a biological genotype but of an artefactual genotype: one that is retrieved as a description from reality itself which has already been constructed by the activity of man.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.44

等视域（Isovist）

等视域指根据环境限制，从空间的特定点看出去，其所有可见的点构成的集合。等视域的形状和大小随观察点的不同而加以变化。

An isovist is a set of all points visible from a given vantage point in space and with respect to an environment. The shape and size of an isovist is liable to change with position.

来源：

Benedikt, M. L. (1979) To Take Hold of Space: Isovists and Isovist Fields. Environment and Planning B, 6(1) 47-65.pp. 47

等视域深度（Isovist Depth）

等视域深度指任意两个空间点之间的最短路径上的等视域连接次数之和。

Isovist depth means the number of graph connections traversed on the shortest path joining any pair of nodes.

来源：

Turner, A. & Penn, A. (1999), Making Isovists Syntactic: Isovist Integration Analysis, In Proceedings of the 2nd International Space Syntax Symposium, Universidade de Brasilia, Brazil, 1-9. pp.3

等视域集合（Isovist Fields）

等视域集合是一系列的等视域，定量地描述环境中的不同部分在何时、以何种变化率得以可见或不可见，以及等视域的形状和大小转换的方式。

A set of isovist measures quantitatively describing when and at what rate different parts of the environment become visible to the observer, which parts are obstructed (how and when), as well as some appreciation of the transformation of isovist shape and size.

来源：

Benedikt, M. L. (1979) To Take Hold of Space: Isovists and Isovist Fields. Environment and Planning B, 6(1) 47-65. pp. 54

等视域整合度（Isovist Integration）

一般而言，等视域整合度指从系统中某一点到其他所有点最短路径的平均值的标准化倒数。

Isovist integration can loosely refer to a normalised (inverse) measure of the mean shortest path from the point to all other points in the system.

来源：

Turner, A. & Penn, A. (1999), Making Isovists Syntactic: Isovist Integration Analysis, In Proceedings of the 2nd International Space Syntax Symposium, Universidade de Brasilia, Brazil, 1-9. pp.3

i 值（i-value）

i 值指理论化的总拓扑深度的标准化。根据斯特德曼的《建筑形态：建筑物平面的几何介绍》中明确的标准化公式来计算。

The i-value refers to the theoretically normalised total depth. It is calculated by the normalisation formula discussed and clarified by Steadman in Architectural Morphology.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.77

空间布局的无形价值（iVALUL (The Intangible Value of Layout)）

空间布局的无形价值是城市活力中的最大研究项目，由空间句法领衔，召集了 20 多家公共机构、私人公司、教育机构、以及志愿组织，包括英国内政部、英国建成环境设计研究院、英格兰东南区域委员会、英格兰东部区域委员会、东伦敦大学、伦敦大学学院、大伦敦议会经济研究中心、Savills 研究中心、Cbuchanan 交通公司、以及 JMP 交通公司。

i-VALUL is one of the largest projects in the UrbanBuzz programme, led by Space Syntax and bringing together over 20 public, private, higher education and voluntary sector organisations, including The Home Office, CABE, SEEDA, EEDA, UEL, UCL, GLA Economics, Savills Research, CBuchanan and JMP.

来源：

Space Syntax: http://www.spacesyntax.com/project/valuing-urban-layout/

Chiaradia, A. J. and Schwander, C. 2009. i-VALUL: The socio-economic value of urban layout. In: University College London, ed. UrbanBuzz autumn update: from research to reality - new techniques, tools and processes to support sustainable communities. London, UK: University College London, pp. 30-33.

调整关系分析图（Justified Map/Graph）

调整关系分析图将一个圆圈放在最下面，表示图示中最底层的根元素，所有与该根元素直接相连的圆圈排列一行，代表 1 个拓扑深度，位于根元素之上；所有距离根元素 2 步拓扑深度的圆圈直接与拓扑深度为 1 的圆圈相连；直到所有层级的圆圈都得以遍及到。

A justified map/graph is one in which some point is put at the base, and the all points of depth 1 from that point are aligned horizontally immediately above it, all points at depth 2 from that point above those at depth 1, and so on until all levels of depth from that point are accounted for.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.106

亲属关系（Kinship）

亲属关系在空间句法研究中用于分析社会关系结构与空间演变之间的关系。

Kinship is used to analysis how social morphology relate to spatial dynamics in the space syntax studies.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.200-201

标记图（Labelled Graph）

标记图指拓扑关系图中的节点都得以标记分类（也许是随机标记分类），使之彼此不同，便于统计。

The labelled graph means a graph with each node labelled differently (but arbitrarily), so that all nodes are considered distinct for purposes of enumeration.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.154

城市空间分层模型（Layered Models of Urban Space）

城市空间分层模型指未来的统一空间组构模型，其中包括其他不同的属性层，如实际距离、面积、密度、容积率、形状、行政边界等，因此这些可在单一的组构模型中体现为不同的层。

They are the future of configurational modelling of space, where the other key spatial attributes such as metric distance, area, density, plot ratios,

shape, political boundaries, and so on can be expressed ad different layers within a single configurational model .
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.104-108

最小角度变化（Least Angle Change）

最小角度变化指某条路径上所有的两两最小角度变化之和。
Least angle change is defined as the smallest accumulated total of angular changes that are made on a route.
来源：
Hillier, B. & Iida, S. (2005), Network and psychological effects in urban movement, In: A.G. Cohn and D.M. Mark (Eds.): COSIT 2005, LNCS 3693, pp. 475 - 490. pp482

最少线的轴线图（Least Line Axial Map）

最少线的轴线图指以最少的轴线去表达系统的图示。
Least line axial map is defined as a unique minimal axial graph of a system.
来源：
Turner, A., Penn, A., & Hillier, B. (2005),An algorithmic definition of the axial map. Environment and Planning B: Planning and Design 32(3):425 - 444. pp.432

线分析（Line Analysis）

线分析指空间抽象为线状的分析，其中空间可抽象为轴线或线段。
Line analysis approximately means the analysis of linear representation of spaces, where space is represented as axial line or segment.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.vi

视线（Line of Sight）

视线指单一的视线穿过每个空间，且把那些空间联系起来。

Line of sight is defined as a single direct line of sight passing each space and linking them together.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.174

线性原则（Linearity Principle）

线性原则指按直线的方式，连续布局街坊块。对比那些街坊块聚集成团的方式，这种方式将产生更多的拓扑深度。

Linearly arranged contiguous blocks create more depth gain than coiled or partially coiled blocks.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.282

活力中心（Live Centres）

活力中心指零售、商贸市场、餐饮、娱乐等聚集步行人流的功能性空间场所。

Live centres refers to the locations favoured by and influenced by retail, markets, catering and entertainment, and other activities which especially benefit from passing pedestrian movement

来源：

Hillier, B. (1999),Centrality as a process: accounting for attraction inequalities in deformed grids. Urban Design International , 4 (3/4) 107 - 127. pp.107

局部秩序（Local Order）

局部秩序指某个方块与其周边方块之间的固定关系。

Local order is defined as constant relations between one block and its neighbours

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.277

局部到整体的现象（Local-to-global Phenomenon）

局部到整体的现象指建筑和城市系统中的动态演变现象，其基本演变动力体现为人们感知并认知身边空间的能力，使信息结构化，从而推演形成纷繁复杂的大系统。

The local-to-global phenomenon is the dynamics of architectural and urban systems in which the elementary generators, which express the human ability to cognise and structure an immediate spatial reality, unfold into the ramified complexities of large scale systems.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.69,226

局部到整体的空间法则（Local-to-global Spatial Laws）

局部到整体的空间法则指局部物质空间变动将会影响整体空间组构的效应法则。这些法则与真实建筑物的演变有关，称之为普遍功能，即人们占据空间和交通行走的最基本的空间使用需求。

The local-to-global spatial laws are those governing the passage from local physcial changes in a spatial system to global configurational effects. Those laws are linked to the evolution of real buildings through what will be called generic function, by which is meant the spatial implications of the most fundamental aspects of human use of space, that is, the fact of occupation and the fact of movement.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.5-6,226

长模型（Long Model）

长模型指一组大量的固定性命令，缺乏随机性，这也称为长描述。长模型的形态演变机制是整体性法则严格地控制任何随机过程。那些法则控制的空间潜在关系

越多，那么整体性法则越明确，于是形态演变的可能性就越小，从而形态就越容易被那些法则所完全控制而僵化。参见：短模型。

Long model, also called long description, is a system with a great deal of order would require longer sentences and little randomness. A long model morphogenesis occurs only where the rules restricting the random process are too many or too global. The higher the propotion of possible spatial relations specified by the rules, and the more global those rules, and less the process has morphogenertic potential, and the more it will conserve the form given by the rules. See Short Model.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.12-13; Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.192

低层级的描述性回溯（Low Level Descriptive Retrieval）

低层级的描述性回溯指，描述性回溯发生在复杂体由不同基本元素组合的过程之中。这形成了两方面的模式：一是固定的局部联系模式；二是涌现的整体模式。后者并不是由系统的整体性联系规则而形成的，而是由局部联系规则所激发的。

Low level descriptive retrieval means that description retrieval happens at the level of the way in which a complex is put together by relating different elements to each other. It will create a recognisable pattern in two senses: a pattern in which the local joining rules are consistent, but also in the sense of an emergent global pattern, which is entailed by but not described by the joining rules by which the system is built.

来源：

Hillier, B. (2003) The knowledge that shapes the cities: the human city beneath the social city. In: (Proceedings) 4th International Space Syntax Symposium. : London, UK, 01.1-20. pp. 01.8-01.9

L 形散点图（L-shape）

L 形散点图指双变量相关分析中两组变量的分叉。例如，社会住宅小区的活动分析中，成人出行与小孩活动的两组变量形成了 L 形散点图，这表明成人出行频繁的场所不是小孩喜欢聚集玩耍的地方，反之亦然。这个典型案例研究说明，在社会住宅小区中，那两组人群的空间交流是破裂的。

The L-shape scatter means the one in which two variables are plotted separately along the different axes. For example, two variables are adult movement and static uses of children, and the L-shaped distribution indicates the ruptured interfaces between those two groups of people.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.148-150

人与环境范式（Man-environment Paradigm）

人与环境范式体现在两种相互对立的方法论认知之中，即有机论中的环境认知、以及环境论中的个体认知。这种范式使得我们徘徊在两个问题之间：一是建筑物的空间形态就是某种社会规则形态；二是物质环境没有任何社会内容，而社会没有任何空间内容。前者简化为惰性的物质论，后者简化为抽象论。
Man-environment paradigm lies in two mutually exclusive epistemological positions - that of the organism looking out into the environment, and that of the environment bearing in on the individual. It moves us from a problem definition in which a building is an object whose spatial form is a form of social ordering, into one in which the physical environment has no social content and society has no spatial content, the former being reduced to mere inert material, the latter to mere abstraction.
来源：
Hillier, B. and Leaman, A. (1973) The Man-environment Paradigm and its Paradoxes. Architectural Design, Vol. 43, p 507-511. pp508; Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.8-9

曼哈顿距离（Manhattan Distance）

曼哈顿距离是类比曼哈顿网格，即正交网格中两点之间的水平和垂直距离之和。
Manhattan distance, by analogy with the Manhatten grid, is defined as the sum of the horizontal distance and the vertical distance.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.79

平均深度（Mean Depth）

平均深度指从起始空间到达其他所有空间的距离之和与其他所有空间的数目（排除起始空间）之商。

Mean depth is calculated by assigning a depth value to each space according to how many spaces it is away from the original space, summing these values and dividing by the number of spaces in the system less on (the original space).

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp. 108

机械性融合（Mechanic Solidarity）

正如涂尔干所指出，机械性融合试图通过相似的信仰和族群结构来实现整合。希列尔阐明了该观点与空间相关。他认为机械性融合偏好分散而彼此隔离的空间，这暗示了某种非空间的融合，即采用许多共同的方法去强调社会群体的可识别性，如徽章、典礼、地位、神话等，使得他们获得最大的实现。这也许这基于明显的理由，即缺乏空间整合的群体必须运用其他概念性的方式，去实现群体本身的协调。

Mechanic solidarity, as Durkheim addressed, based on integration through similarities of belief and group structure. Hillier elaborated how this concept is related to space. In his view, mechanic solidarity prferred a segregated and dispersed space, and this suggests the non-spatial sodality, that many of the common techniques for emphasising the identity of social groups - insignia, ceremony, statuses, mythologies and so on - find their strongest realisation, most probably for the obvious reason that groups that lack spatial integration must use other, more conceptual means if they are to cohere as groups.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp. 7, 18

米制分区现象（Metric Area-isation）

米制分区现象指城市网络被分为半连续性的而又类似马赛克的地区，这源于城市街坊块本身的方位、形状以及尺度的功能性需求。

Metric area-isation means urban network is partitioned into a patchwork of semi-discrete areas resulted from a function of the placing, shaping and scaling of urban blocks.
来源：
Hillier, B., Turner, A., Yang, T., Park, H-T. (2007, 2010) Metric and topo-geometric properties of urban street networks: some convergencies, divergencies and new results. The Journal of Space Syntax, V(1) 2, 258-279. pp.259

米制穿行度（Metric Choice）

米制穿行度指每条线段位于任意两两线段之间的最短米制距离的路径的次数。
Metric choice measures how many metric-distance-minimising paths between every pair of segments, each of which lies on under the definition of metric distance, that is, the metric distance along the lines between the mid-points of two adjacent segments.
来源：
Hillier, B. (2009),Spatial sustainability in cities: organic patterns and sustainable forms. In: Koch, D. and Marcus, L. and Steen, J., (eds.) Proceedings of the 7th International Space Syntax Symposium. (pp. p. 1). Royal Institute of Technology (KTH): Stockholm, Sweden. pp. k01.3-4.

米制整合度（Metric Integration）

米制整合度指每条线段距离其他所有线段的米制距离之和，其米制距离为两条线段中点之间的米制距离。
Metric integration measures how close each segment is to all others under the defintion of metric distance, that is, the metric distance along the lines between the mid-points of two adjacent segments.
来源：
Hillier, B. (2009),Spatial sustainability in cities: organic patterns and sustainable forms. In: Koch, D. and Marcus, L. and Steen, J., (eds.) Proceedings of the 7th International Space Syntax Symposium. (pp. p. 1). Royal Institute of Technology (KTH): Stockholm, Sweden. pp. k01.3-4.

米制半径（Metric Radius）

米制半径用于选择距离起始空间的特定范围内的一组空间。例如，100 米半径用于选择距离起始空间 100 米范围以内的所有空间。

Metric radius is defined as a 'cookie cutter' of a set of spaces within a fixed metric distance away from a root space. For example, it is used to selected all the spaces within 100m from a root space to be analysed.

来源：

Turner, A. (2008) Getting Serious with DepthMap: Segment Analysis and Scripting. UCL. pp. 18-25.

米制特征（Metric Signature）

米制特征是体现局部米制距离的空间变形。这可由局部空间的分隔模式与整个系统的米制距离模式的对比来明确：在纵轴上是随半径增加的米制距离平均值，而在横轴上是半径为 n 的米制距离平均值，它们之间的比较是一系列的散点图。

Metric signature expresses the local metric distortion introduced into space by the local spatial partitioning against thematic pattern of the whole system. It is illustrated by the sequence of scattergrams plotting the mean metric distance values at increasing radii on the y-axis and mean metric distance values at radius-n on the x-axis.

来源：

Hillier, B., Turner, A., Yang, T., Park, H-T. (2007, 2010) Metric and topo-geometric properties of urban street networks: some convergences, divergences and new results. The Journal of Space Syntax, V(1) 2, 258-279. pp.268

米制总距离（Metric Total Depth）

米制总距离指从一点到其他所有点的最短米制距离之和。

Metric total depth is the cumulative total of the shortest metric distance paths between all pairs of nodes.

来源：

Hillier , B. & Iida, S. (2005), Network and psychological effects in urban movement, In: A.G. Cohn and D.M. Mark (Eds.): COSIT 2005, LNCS 3693, pp. 475 - 490. pp.482

米制总线段长度（Metric Total Segment Length）

米制总线段长度指从起始线段的中点到目的地线段中点之间的最小米制距离。

Metric total segment length is defined as the metric distance from the mid-point of origin segment to that of destination segment along a smallest metric distance path.

来源：

Hillier , B. & Iida, S. (2005), Network and psychological effects in urban movement, In: A.G. Cohn and D.M. Mark (Eds.): COSIT 2005, LNCS 3693, pp. 475 - 490. pp.481

微观经济过程（Micro-economic Process）

微观经济过程包括市场活动、交易、以及运营，常常尽量使得整合度最大（最小化普遍距离），使得空间中自然而然的共同在场尽量多，因此本质上将形成更长的街道，构成城镇的基本空间结构。

Micro-economic process, involving the activities of markets, exchange and trading, operates of necessity by always maximising integration (minimising universal distance) in order to maximise natural co-presence in space, so that it in nature generates the longer lines and the essential structure of the settlement.

来源：

Hillier, B. (2001), A Theory of the City as Object: Or, how spatial laws mediate the social construction of urban space. In: Proceedings of 3rd International Space Syntax Symposium Atlanta 2001, 02.1-02.28. pp. 02.1-27

闵可夫斯基模型（Minkowski model）

闵可夫斯基模型的建构是绘制特定环境中特定路线的二维等视域图，其中空间变量位于横轴，时间位于纵轴。改变环境或路径，将形成不同的闵可夫斯基模型。

Minkowski model is constructed by drawing two-dimensional isovists along a given path relative to a given environment, where space is read in the horizontal plane, whereas time is read in the vertical dimension. Changing the path or the environment gives a different Minkowski model.

来源：

Benedikt, M. L. (1979) To Take Hold of Space: Isovists and Isovist Fields. Environment and Planning B, 6(1) 47-65. pp. 54

m线（m-lines）

m线也称为出行形态线，特指采用非确定性多项式的贪心遍及算法，从全线轴线图中提取的最少的轴线。首先，选取一根穿越最多表面延伸线（s-lines）的线，然后选取另一根穿越次多的表面延伸线的线（然而与第一条线不重叠），如此下去，直到所有的表面延伸线得以穿越。

m-lines, called 'movement lines', is a fewest-line set reduced from an all-line map by using a greedy algorithm of tackling an NP-hard problem. It first selects a line which crosses the maximum number of s-lines, and then selects the line crosssing the second maximum number of s-lines (not crossed by the first line), and added to the set. And so on, until no more s-lines remain.

来源：

Peponis, J., Wineman, J., Rashid, M., Kim, S. and Bafna, S. (1997), On the Generation of Linear Representation of Spatial Configuration. In: Proceedings of 1st Space Syntax Symposium, 41.01-18. pp. 41.03-05

山型散点图（Mountain Scattergram）

山型散点图用于识别多尺度的城市分区结构，其中横轴是全局米制平均深度，而纵轴是特定半径下的米制平均深度。山峰代表中心较小街坊而边缘较大街坊的地区；而谷底表示中心较大街坊而边缘较小街坊的地区。

Mountain Scattergram refers to the one plotting the Metric Mean Depth (MMD) pattern at a certain radius on the y-axis against the Metric Mean Depth (MMD) at radius-n on the x-axis, with an aim of detecting multi-scaled area structures of a city. The peaks denote the areas with smaller central blocks and larger edge ones, and the troughs show the areas with larger central blocks and smaller edge ones.

来源：

Hillier, B., Turner, A., Yang, T., Park, H-T. (2007, 2010) Metric and topo-geometric properties of urban street networks: some convergencies, divergencies and new results. The Journal of Space Syntax, V(1) 2, 258-279. pp. 260

形态语言（Morphic Language）

形态语言用于理解形态如何从极少的基本元素、关系和操作中形成。因此，它包含三件事情：一是最少的起始条件，包括背景空间和随机过程；二是句法，即一组基本要素、关系和操作，可组合起来形成限制规则，控制最少背景空间中的随机过程；三是句法法则，根据某些自然和逻辑的限制，尽可能地罗列出来。

Morphic language aims to understand how the morphology may be generated from a parsimonious set of elementary objects, relations and operations. It therefore consists of three things: 1, a minimum setup, made up of a carrier space and a randomised ongoing process; 2, a syntax, that is a set of elementary objects, relations, and operations capable of being combined to form rule structures to restrict the randomness of the minimum setup; and 3, a syntax-rule, which ideally should exhaust itself against some natural or logical limit.

来源：

Hillier, B., Leaman, A., Stansall, P., Bedford, M., (1976) Space Syntax. Envrionment and Planning B, vol (3), 147-185. pp.150.

形态生长模型（Morphogenetic Model）

形态生长模型是这种类型的模型，如细胞聚集模型或图论中关联生成模型，其中的规则不是真实世界的思想主体的投射或自我映射，而是对随机生成过程的限制。

Morphogenetric model is a model in which rules are conceived of not as mental entities producing projections or reflections of themselves in the real world, but as restriction imposed on an otherwise random generative process, such as a cell aggregation model, or a model generating relationships in a graph.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.192

出行经济（Movement Economy）

出行经济理论基于自然出行的概念，特指城镇空间组织演变首先形成了疏密相间的出行流模式，这影响用地选择，反过来又影响交通出行，构成了多重反馈效应，进一步影响用地选择和局部路网构成，以此适应更高强度的开发。

The theory of movement economy , built on the notion of natural movement, proposes that evolving space organisation in settlements first generates movement patterns, which then influence land use choices, and these in turn generate multiplier effects on movement with further feedback on land use choices and the local grid as it adapts itself to more intensive development.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.125-127

多重功能性（Multifunctionality）

多重功能性源于用地模式和建筑密度，这些受到空间与交通关系的影响，从而形成了城市的各种结构特征，彼此相互作用，构成了城市所独有的幸福与喜悦。

Multifunctionality arises from patterns of land use and building densities, which are themselves influenced by the space-movement relation, that give cities their characteric structures, and give rise to the sense that everything is working together to create the special kinds of well-being and excitement that we associate with cities at their best.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.113-4

标准化角度穿行度（NACH(Normalised angular choice)）

标准化角度穿行度是为了解决一个悖论，即相对于促进空间整合的设计，那些导致空间隔离的设计反而增加了系统的总(或平均)穿行度。对于系统中每条线段，总穿行度除以总深度。这根据系统中每条线段的深度，调整了穿行度的数值，因为越是隔离的线段，越可以通过除以更大的深度而将其穿行度的数值降低。这也可视为按收益和成本的方式去计算穿行度，该概念最初由杨滔提出。

Normalised choice aims to solve the paradox that segregated designs add more total (and average) choice to the system than integrated ones. It

divides total choice by total depth for each segment in the system. This adjusts choice values according to the depth of each segment in the system, since the more segregated is, the more its choice value with be reduced by being divided by a higher total depth number. This would seem to have the effect of measuring choice in a cost-benefit way, which was firstly proposed by Tao Yang.

来源：

Hillier, B., Yang, T., Turner, A. (2012) Advancing DepthMap to advance our understanding of cities: comparing streets and cities, and streets to cities. In: Greene, M and Reyes, J and Castro, A, (eds.) 8th International Space Syntax Symposium. Pontificia Universidad Catolica de Chile: Santiago, Chile.

标准化角度整合度（NAIN(Normalised angular integration)）

标准化角度整合是将角度总深度与城市系统总深度的均值相比较，从而使其标准化。

Normalised angular integration aims to normalise angular total depth by comparing the system to the urban average.

来源：

Hillier, B., Yang, T., Turner, A. (2012) Advancing DepthMap to advance our understanding of cities: comparing streets and cities, and streets to cities. In: Greene, M and Reyes, J and Castro, A, (eds.) 8th International Space Syntax Symposium. Pontificia Universidad Catolica de Chile: Santiago, Chile.

自然出行（Natural Movement）

自然出行是街道网络的组构本身所引发的那部分步行出行。

Natural Movement in a grid is the proportion of urban pedestrian movement determined by the grid configuration itself.

来源：

Hillier, B., Penn, A., Hanson, J., Grajewski, T., Wu, J. (1993), Natural Movement: or, Configuration and Attraction in Urban Pedestian Movement. Environment and Planning B, vol (20), 29-66. pp. 32

自然周期性模式（Natural Periodicity）

自然周期性模式体现了所有尺度下自然的空间分区，折射出我们讨论不同尺度的城市地区和区域的方式。

Natural periodicity demonstrates a natural spatial area-isation at all scales, reflecting the ways in which we talk about urban areas and regions at different scales.

来源：

Hillier, B., Turner, A., Yang, T., Park, H-T. (2007, 2010) Metric and topo-geometric properties of urban street networks: some convergencies, divergencies and new results. The Journal of Space Syntax, V(1) 2, 258-279. pp. 260；

Yang, T. & Hillier, B. (2007), The fuzzy boundary: the spatial definition of urban areas, In: the Proceedings of 6th International Space Syntax Symposium, 091-16. pp.091-02

自然监视（Natural Surveillance）

自然监视取决于空间组构，创造了居民和陌生人在同一空间的充分偶遇，这是安全感的来源。陌生人的自然出行提供了对空间的自然监视，而驻足的居民在住宅的出入口和窗口，对行走的陌生人形成了自然监督。

Natural surveillance depends on the spatial configuration creating a strong probabilistic interface between inhabitants and strangers in space that is the source of safety. The natural movement of moving strangers maintains natural surveillance on space, while the static inhabitants, through their dwelling entrances and windows, maintain natural surveillance of moving strangers.

来源：

Hillier, B., Turner, A., Yang, T., Park, H-T. (2007, 2010) Metric and topo-geometric properties of urban street networks: some convergences, divergences and new results. The Journal of Space Syntax, V(1) 2, 258-279.pp. 146

负吸引点（Negative Attractor）

负吸引点是自然出行降低的地点或场所，虽然作为补偿，也许可通过其他方式吸引人们来此聚集。

Negative attractor is the thing or location where the natural movement rates decrease, though this may of course be compensated by the numbers of people attracted to it for other reasons.
来源：
Hillier, B., Penn, A., Hanson, J., Grajewski, T., and Xu, J. (1993), Natural Movement: or. Configuration and Attraction in Urban Pedestrian Movement. Environment Planning B, 20(1) 29-66. pp. 42-44;
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.189

节点计数（Node Count）

节点计数在 Confeego 软件中也称为 k，度量从某条轴线（或线段）到其他所有目的地轴线（或线段）的路径中所遇到的轴线（或线段）之和。
Node count, also called k in Confeego, measures the number of lines (or segments) encountered on the route from the selected line (or segment) to all others.
来源：
Turner, A. (2004), DepthMap4: A Researcher’s Handbook, UCL. pp.29.

不可言表的技术（Non-discursive Technique）

不可言表的技术指处理难以用语言标的的事件模式以及形态空间的组构等的技术。
Non-discursive technique means a technique for handing those non-discursive matters of pattern and configuration of form and space that we find it hard to talk about.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.59

不可言表（Non-discursivity）

不可言表指我们不知道如何去谈论某事情，且我们平时积极地使用之，也不会去谈论之。
Non-discursive means that we do not know how to talk about it and do not in general talk about it even when we are most actively using it.
来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.3

非分布式（Nondistributedness）

非分布式指空间结构源于围绕某些元素的边界或空间所构成的复杂系统。

Nondistributedness means that spatial structure results from an increasingly complex system of boundaries or spaces surrounding cells.

来源：

Hillier, B., Leaman, A., Stansall, P., Bedford, M., (1976) Space Syntax. Envrionment and Planning B, vol (3), 147-185. pp. 180

标准化公式（Normalisation Formula）

空间句法中的标准化公式是消除总拓扑深度或穿行度计算中系统规模的影响。

Normalisation formula, defined in space syntax, seeks to take the effect of the number elements in the graph out of the total depth and/or choice calculation.

来源：

Hillier, B., Hanson, J., Peponis, J., Hudson, J., and Burdett, R. (1983) Space Syntax: A Different Urban Perspective. Architect's Journal, November 30: 47-63. pp. 47-63.

建筑的范式理论（Normative Theory of Architecture）

建筑的范式理论是一系列的范式规则，说明建筑物应如何建造，而不是阐明建筑物是怎么样的。

A normative theory of architecture is a set of normative rules about how building should be done.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.32-4.

客观的主体（Objective Subject）

客观的主体指普遍化的人类主体，这不是时空中的简单个体，而是根据直觉领会的客观法规而行动的个体，存在于城市形态和功能的方方面面，同时又从某个特定的角度审视城市，依据自己的认知能力，创造出城市的意向。

Objective subject is the generalised human subject, not simply in the sense of historical individuals located in time and space and acting according to laws which, although objective, are intuitively known, and who by virtue of being everywhere in space and time in the formation and working of the city, everywhere imposes its point of view on the city, and creates the city in the image of its own cognitive capability.

来源：

Hillier, B. (2003) The knowledge that shapes the cities: the human city beneath the social city. In: (Proceedings) 4th International Space Syntax Symposium. : London, UK. pp.01.4-5

有机融合（Organic Solidarity）

有机融合在涂尔干看来是，基于分工或城市化中彼此依赖的不同群体，而构成了社会形态。希列尔强调该理念的空间维度，认为有机融合需要某个整合而高密度的空间，使得共同在场或彼此临近得以实现。参见：机械融合。

Organic solidarity, according to Durkheim, was a form of society based on interdependence through differences, such as that resulting from the division of labour or urbanisation. Hillier addressed the spatial dimension of this concept by stating that organic solidarity requires an integrated and dense space, where co-presence or proximity is realised. See: Mechanical solidarity.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp. 18

有机论-环境论范式（Organism-environment Paradigm）

有机论-环境论范式不仅仅指简单的环境决定论，而是指形态演变过程中有机论本身所具备的活力和主观目标。

Organism-environment paradigm means not simply the idea of environmental determination, but also the vitalistic and subjectivistic objections to

it which sought to invovle the organism itself in the process of the evolution of its form.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.297-298

重叠凸空间（Overlapping Convex Space）

重叠凸空间是根据每个街坊块的街道界面所确定的。每个最大的凸空间都是由于街道界面所明确，而这些凸空间无可避免地会重叠。那些重叠部分本身都是较小的凸空间，而那些凸空间之间不会完全彼此互视，也就不会形成更大的凸空间。
Overlapping convex space is defined by reference to the surface of each block, each of which defines its maximal convex field. There fields will inevitably overlap, and where they do, the area of overlap will itself form a smaller convex element from which both overlapping convex spaces will be fully visible, that is, will be convex, although these spaces are not convex to each other.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.93

重叠效应（Overlapping Effect）

重叠效应指随半径的增大，根据不同起始线段而选择的子系统将会重叠，因此重叠的线段群将用于度量该效应。
Overlapping effect is defined as that with increasing radius the radius fields from the different root segments overlap with each other, so increasingly overlapping groups of segments are being used to calculate the measure.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp. 263

Pajek 软件（Pajek）

Pajek 软件用于关系图的可视化分析工具，由卢布尔雅那大学的弗拉迪米尔•巴塔盖尔吉和安德烈•姆尔瓦编写。下载网址：http://pajek.imfm.si/doku.php.
Pajek is a computer program for the analysis and visualisation of graphs. It was written by Vladimir Batagelj and Andrej Mrvar of the University of Ljubjana can be downloaded from
http://pajek.imfm.si/doku.php.
来源：
Batagelj, V. and Mrvar, A. (2006). Pajek. Program for Analysis and Visualization of Large Networks. Reference Manual, version 1.15. Ljubljana.

分隔理论（Partitioning Theory）

分隔理论指空间系统中局部的物质形态变化常常带来整体的组构效应。
A theory of partitioning is proposed, in which it is shown that local physical changes in a spatial system always have more or less global configurational effects.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.5, 216-286

局部-整体问题（Part-whole Problem）

局部-整体问题指大部分城市由很多部分组成，且各个部分具备较强的场所感，然而很难从形态的角度将这些部分一一区分开来，至少在设计的层面上难以区分。
The part-whole problem refers to the fact that in most cities made up of parts with a strong sense of local place it is almost impossible to make a clear morphological distinction between one part and another, at least not at the level at which it could inform design.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp. 113

马赛克理论（Patchwork Theory）

马赛克理论是关于街坊块大小和形状的理论，诠释物质空间结构的建构和体型环境所导致的局部城市空间的变化。这解释了城市背景网络被分隔为局部地区所构成的马赛克结构。

The patchwork theory is a theory of block size and shape, picking up the local distortions in urban space induced by the placing and shaping of physical structures. This explains the phenomenon that the background urban network is partitioned into a patchwork of local areas.

来源：

Hillier, B., Turner, A., Yang, T., Park, H-T. (2007, 2010) Metric and topo-geometric properties of urban street networks: some convergencies, divergencies and new results. The Journal of Space Syntax, V(1) 2, 258-279. pp. 259;

Yang, T. & Hillier, B. (2007), The fuzzy boundary: the spatial definition of urban areas, In: the Proceedings of 6th International Space Syntax Symposium, 091-16. pp.091-02

每个智能体的等视域集合（Per Agent Cumulative Isovist）

每个智能体的等视域集合指某个智能体在出行过程中，所看的建成区域范围的集合。换言之，该智能体在 1800 步的生命周期内，所形成了等视域集合，体现为整个建成区域的一部分。

Per agent cumulative isovist means the mean fraction of building area the could have been viewed by an agent during its visit, that is, the cumulative isovist area for the agent during its 1800-step lifespan, expressed as a fraction of total floor area.

来源：

Turner, A. & Penn, A. (2002), Encoding natural movement as an agent-based system: an investigation into human pedestrian behaviour in the built environment. Environment and Planning B: Planning and Design 2002, pp. 473-490.

无所不在的中心性（Pervasive Centrality）

无所不在的中心性指城市的中心遍及城市网络的各个部分，比通常设想的要更为精致。多重中心是城市的普遍性功能，与空间显然相关，而非简单的区位等级。
Pervasive centrality means that the function of centrality in cities pervades the urban grid in a more intricate way than has been thought, and that multi scale centrality should be seen as a pervasive function in cities, with clear spatial correlates, and not simply as a hierarchy of locations.
来源：
Hillier, B. (2009),Spatial sustainability in cities: organic patterns and sustainable forms. In: Koch, D. and Marcus, L. and Steen, J., (eds.) Proceedings of the 7th International Space Syntax Symposium. (pp. p. 1). Royal Institute of Technology (KTH): Stockholm, Sweden. pp. K01:3

表征（Phenotype）

空间句法中的表征指空间形态本身。这是个空间概念。
Phenotype indicates spatial forms themselves in the field of space syntax. It is a spatial concept.
来源：
Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.12

平面关系图（Planar Graph）

平面关系图指可在二维平面中绘制的关系图，且联系节点的边不会交叉。
A planar graph is the graph that can be drawn in a plane without graph edges crossing.
来源：
Wilson, R. (1996). An Introduction to Graph Theory. London: Longman. p.162

基点可理解度（Point Intelligibility）

基点可理解度基于轴线模型，用于识别城市中的分区结构。采用如下步骤：首先选择距离起始轴线最近的一组 N 条轴线，然后计算这组轴线的可理解度，即连接度与半径 n 的整合度之间的相关度，最后将此可理解度赋予那条起始轴线。

Point intelligibility, based on axial modelling, aims to detect area structure in cities. It is carried out as following: a subset of the N closest axial lines connected to a root line are first selected, and then intelligibility, the correlation between connectivity and integration Rn, is calculated for that subset and then assigned back to the root line.
来源：
Dalton, N. S. (2007) Is Neighbourhood Measurable? In: Proceedings of 6th International Space Syntax Symposium, 088-01-12. pp. 088-04-05

基点协同度（Point Synergy）

基点协同度基于轴线模型，用于识别城市中的分区结构。采用如下步骤：首先选择距离起始轴线最近的一组 N 条轴线，然后计算这组轴线的协调度，即半径 3 的整合度与半径 n 的整合度之间的相关度，最后将此协调度赋予那条起始轴线。
Point synergy, based on axial modelling, aims to detect area structure in cities. It is carried out as following: a subset of the N closest axial lines connected to a root line are first selected, and then synergy, the correlation between integration R3 and integration Rn, is calculated for that subset and then assigned back to the root line.
来源：
Dalton, N. S. (2007) Is Neighbourhood Measurable? In: Proceedings of 6th International Space Syntax Symposium, 088-01-12. pp. 088-04-05

贫穷线（Poverty Line）

在空间句法研究中，贫穷线是条名义线，用于区别两种空间，即空间上隔离且较为贫穷的，以及空间上整合且较为富裕的。
Poverty line, in space syntax research, is defined as the notional line distinguishing between poor, spatially segregated streets and more prosperous, spatially integrated streets.
来源：
Vaughan, L., (2007). The Spatial Form of Poverty in Charles Booth’s London. Progress in Planning , 67 (3).

组织化的出行（Programmed Movement）

组织化的出行指预设的组织出行系统，使得交通与交流必须发生，且容纳所有事件。出行模式是经由空间布局中的预设出行组织方式而形成的，而非经由空间布局本身而形成的。

Programmed movement means a system of movement is programmed in advance in order to structure the interfaces that must occur and inhabit all others. The movement pattern is generated by the programme operating within the layout, rather than the layout itself.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp. 198-9

相对非对称性（RA, Relative Asymmetry）

相对非对称性是比较某一特定点的实际拓扑深度与该点的理论拓扑深度，即那个特定点与其他所有空间直接相连就具有最小拓扑深度，而那个特定点与其他所有空间连成直线就具有最大拓扑深度（因为每个新加的空间都将增加新的一层拓扑深度）。这是总拓扑深度标准化的理论模式。

Relative asymmetry compares how deep the system is from a particular point with how deep or shallow it theoretically could be - the least depth existing when all spaces are directly connected to the original space, and the most when all spaces are arranged in a unilinear sequence away from the original space, i.e. every additional space in the system adds one more level of depth. This is a theoretical way of normalising total depth.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.108-109

半径（Radius）

半径是一种工具，从整个系统中选择某起始空间周边的一组空间，用于分析。例如，可选择某起始空间周边 1000 米范围内的所有空间，其 1000 米就是半径。

Radius can be considered as a 'cookie cutter' of a set of spaces selected from the whole system to be analysed round a root space. For example, it is used to selected all spaces within 1000m from a root space.

来源：
Turner, A. (2008) Getting Serious with DepthMap: Segment Analysis and Scripting. UCL. pp. 18-25.

半径-半径（Radius-radius）

半径-半径指空间句法轴线分析中试图最大化分析半径，而不带来边缘效应的那种半径（边缘效应特指空间系统边缘的部分比其真实情况更为隔离，因为它们与系统外的部分缺少联系）。半径-半径的确定依据全局最为整合的轴线的平均深度，将此作为最大的半径。参见：边缘效应。
Radius-radius refers to the radius at which space syntax axial analysis attempts to maximise the radius of the analysis without inducing edge effect, (that is, the tendency for the edges of spatial system see more segregated than they might be in reality, simply because they aren't connected onwards). It is calculated by taking the mean depth from the most globally integrated line in the system and using this as the maximum radius. See: Edge Effect.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.120-121

规则与理论（Regularities vs. Theories）

规则是反复出现的现象，或体现为明显的类型，或体现为事件出现的时间秩序的持续性；而理论则是去模拟产生规则的内在过程。所有的科学都是基于规则去做理论。
Regularities are repeated phenomena, either in the form of apparent typing or apparent consistencies in the time order in which events occur; but theories are attempts to model the underlying processes that produce regularities. Every science theorises on the basis of its regularities.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.4

标准熵（Relativised Entropy）

标准熵是排除从起始空间起的预计空间分布模式。在大多数情况下，当你穿行在网格时，在平均深度之前将会遇到越来越多的空间，而在此之后，将会遇到越来越少的空间。

Relativised entropy takes account of the expected distribution from a space of origin. That is, in most cases, you would expect the number of spaces encountered as you move through the grid to increase up to the mean depth and then decline afterwards.

来源：

Turner, A. (2004), DepthMap4: A Researcher's Handbook, UCL. pp.15

归一化（Revelation）

归一化也称为标准化，目的是排除系统规模对句法数值的影响，以此可跨越街道、片区、城市和区域等去比较句法数值。

Revelation, also called standardisation or normalisation, aims to get rid of size effect on syntactic values, and so compare those values across streets, areas, cities and regions.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.108-109; Teklenburg, F. A. F. et al (1993), Space Syntax: Standardised Integration Measures and Some Simulations, Environment and Planning B, volume 20. pp. 347-357

环状度（Ringiness）

环状度指系统中环形(或潜在的交通环路)的数量与最多可能的环形数量的比值。

Ringiness measures the number of rings (or circuits of possible movement) in the system as a proportion of the maximum possible rings for that number of spaces

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.102

实际不对称值（RRA, Real Relative Asymmetry）

实际不对称值（RRA）是某个空间的不对称值与钻石形状系统的起始空间（位于关系分析图的底部)的不对称值的商值。实际不对称值用于比较不同大小的系统，这是总深度标准化的经验做法。

Real relative asymmetry compares the RA value of a particular space with the RA value for the root - the space at the bottom of a justified map - of a diamond-shaped system. RRA values will only be needed when comparing across systems of different sizes. This is an empirical way of normalising total depth.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.111-113

线段（Segment）

线段特指轴线（或街道或路线）的相邻交点之间的部分。

Segment is defined as line segments between intersections of axial lines.

来源：

Hillier , B. & Iida, S. (2005), Network and psychological effects in urban movement, In: A.G. Cohn and D.M. Mark (Eds.): COSIT 2005, LNCS 3693, pp. 475 - 490. pp.481

线段分析（Segment Analysis）

线段分析包括线段图的任何类型的分析，如 DepthMap 中的拓扑、角度以及米制分析。

Segment analysis is any analysis of a segment map, including topological, angular and metric analyses in DepthMap.

来源：

Turner, A. (2004), DepthMap4: A Researcher's Handbook, UCL. pp.26

线段角度穿行度（Segment angular choice）

线段角度穿行度是指在特定距离范围内，任意两两线段之间的最小角度变化的路径数量。角度距离指路径上所有相邻线段的角度变化之和。相对于轴线分析和街坊块距离分析算法，“角度线段分析算法”所得到的结果与车流交通的相关性更高。

Segment angular choice measures how many least angular paths lie between every pair of segments within a given distance. Angular distance is defined as the cumulative amount of angular change between all adjacent segments along the path. The “angular segment analysis algorithm produces better correlation with observed vehicular flow than both standard axial analysis and block-distance measure”

来源：

Hillier , B. & Iida, S. (2005), Network and psychological effects in urban movement, In: A.G. Cohn and D.M. Mark (Eds.): COSIT 2005, LNCS 3693, pp. 475-490.

线段角度连接度（Segment Angular Connectivity）

线段角度连接度指与某条线段直接相交的其他线段所形成的角度之和。

Segment angular connectivity is defined as the cumulative turn angle to a root segment.

来源：

Turner, A. (2004), DepthMap4: A Researcher’s Handbook, UCL. pp.27

线段角度整合度（Segment angular integration）

线段角度整合度指根据每条路径上角度变化之和，计量每条线段与其它所有线段的整合关系。该变量是标准化的角度总深度的倒数，可用于不同系统之间的比较。

Segment angular integration measures how close each segment is to all others in terms of the sum of angular changes that are made on each route. It is measured as the reciprocal of the normalised angular total depth, allowing it to be compared across systems.

来源：

Hillier , B. & Iida, S. (2005), Network and psychological effects in urban movement, In: A.G. Cohn and D.M. Mark (Eds.): COSIT 2005, LNCS 3693, pp. 475-490.

线段连接度（Segment Connectivity）

线段连接度指与某条线段直接相交的其他线段数量。

Segment connectivity is defined as the number of segments directly connecting a root segment.
来源：
Turner, A. (2004), DepthMap4: A Researcher's Handbook, UCL. pp.27

线段长度（Segment Length）

线段长度指线段的实际距离长度。
Segment length is the metric length of segment.
来源：
Turner, A. (2004), DepthMap4: A Researcher's Handbook, UCL. pp.27

线段图（Segment Map）

线段图一般是根据轴线图来生成的，即在轴线的交点出打断轴线。另一种方法是根据道路中心线图来生成，需要简化并清洗数据，减少过于复杂的曲线，并删除冗余的道路交通信息。
The segment map is normally constructed from an axial map. Axial lines are broken at their intersections. An alternative method takes the road centrelines from a pre-drawn transport network and simplifies and cleans it up to reduce over-articulated curves and to remove extraneous road traffic features
来源：
Turner, A. (2004), DepthMap4: A Researcher's Handbook, UCL. pp.26-27

隔离（Segregation）

空间句法中的隔离指某个空间距离其他所有空间的拓扑深度较大。更为隔离的空间具有较大的拓扑深度均值。
Segregation, defined in space syntax, means spaces are deeper from all other spaces. More segregated spaces have higher mean depth values.
来源：
Hillier, B., Penn, A., Hanson, J., Grajewski, T., and Xu, J. (1993), Natural Movement: or. Configuration and Attraction in Urban Pedestrian Movement. Environment Planning B, 20(1) 29-66. pp. 35

短模型（Short Model）

短模型也称为短描述，指系统中有大量的随机性，只有少量的规则，本质上采用简短的表意文字描述。这也用于描述形态生长模型，限制随机过程的规则非常少，且属于局部范畴。规则所限定的潜在关系越少，形态变化潜力越大，那么创造新形态的可能性更大。见长模型。

Short model, also called short description, means a system with a good deal of randomness and few rules could in principle be written in a short ideographic sentence. It also describes a morphogenetic model in which the rules restricting the random process are few and local in their scope. The lower proportion of possible relations specified by rules, the greater the morphological potential, and then more it will generate new forms. See Long Model.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.12-13;

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.192

最短路径（Shortest Path）

最短路径是根据人们出行认知模式的距离定义方式来确定的。这可被诠释为最短米制距离的路径、最少转弯次数的路径、或最小转弯角度的路径（即起讫点之间角度变化之和的最小值的路径）。

Shortest path can be defined in terms of how distance is conceptualised in human navigation. It can be interpreted as least length path (the shortest metric distance), fewest turns path(the least number of direction changes), or least angle path (the smallest accumulated total of angular change on the path between origin and destination).

来源：

Hillier , B. & Iida, S. (2005), Network and psychological effects in urban movement, In: A.G. Cohn and D.M. Mark (Eds.): COSIT 2005, LNCS 3693, pp. 475 - 490. pp. 482

S 表面延伸线（s-lines）

S 表面延伸线是延伸所有的优角（大于 180 度、小于 360 度的角）的两条边和所有那些自由端点的墙所形成的线。

s-lines are defined as the lines obtained by extending both sides of all reflex angles as well as all walls terminating at a freestanding end point.

来源：

Peponis, J., Wineman, J., Rashid, M., Hong Kim, S., Barna, S., (1997) On the description of shape and spatial configuration inside buildings: convex partitions and their local properties, Environment and Planning B, Vol 24, 761-781. pp.767-768.

社会文化过程（Social-cultural Process）

社会文化过程的目标是限制诸如居民与陌生人之间、男人与女人之间共同在场的方式，并使之结构化，因此可用于建筑布局，形成相对局部的限制性空间布局。

Social-cultural process aims to restrain and structure co-presence between, say, inhanbitants and strangers or men and women, and therefore to arrange buildings to achieve relatively localised and restrictive spatial layouts.

来源：

Hillier, B. & Netto, V. (2002), Society Seen through the Prism of Space: Outline of a Theory of Society and Space. Urban Design International, 7, 181-203. pp. 182

空间（Space）

空间句法中的空间指相互联系，这是由建筑物和城市的物质空间所确定的，也是由使用物质空间的人们所体验的。因此，空间可被设想为人们所做的任何事情的内在属性，而非那些事情的背景空间。例如，人们在空间中出行，相互交流、或甚至只是站在某处看空间本身。

Space, in the space syntax approach, is defined as relatedness, and as it is, and might be, created by buildings and cities, and as it is experienced by the people who use them. Thus, space is thought of as an intrinsic aspect of everything human beings do in the sense that moving through space, interacting with other people in space, or even just seeing ambient space from a point in it, rather than the background to objects.

来源：
Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.1-5.

空间分隔理论（Space Partitioning Theory）

空间分隔理论指空间系统中局部的物质变化将或多或少地带来整体组构效应，这由少量的简单法则所控制。
Space partitioning theory demonstrates local physical changes in a spatial system have more or less global configurational effects, which is governed by a small number of simple rules.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.217-223

空间句法（Space Syntax）

空间句法是一种空间理论，还是一系列分析建筑物和城市空间布局的定量性和描述性的方法工具。通过研究掌握建筑物和城市中那些与复杂模式相关的变量因素，空间句法可用于揭示物质空间形态的社会成因和影响后果，这遍及从住宅到综合体以及城市中所有类型的建成环境。
space syntax is a theory of space and a set of analytical, quantitative and descriptive tools for analysing the layout of space in buildings and cities. By learning to control the spatial variable at the level of the complex patterns of space that make up the city, it is possible to gain insights into both the social antecedents and consequences of spatial form in the physical city or in buildings ranging from houses to any complex building.
来源：
Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.48-51

时空规律（Space-time Regularities）

时空规律指客观而独立的框架下，真实时空现象中反复出现的相似点和不同点，且与事物有稳定的关联。

Space-time regularities are the similarities and differences repeatedly found and detected in the real space-time phenomena, and constant associations between things, within an objective and independent framework.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.55-60

S 表面分割（S-Partition (s-spaces)）

S 表面分割是延伸所有 s 线，形成空间分割。
S-partition is the partition obtained by extending all the partitions in space.
来源：
Peponis, J., Wineman, J., Rashid, M., Hong Kim, S., Barna, S., (1997) On the description of shape and spatial configuration inside buildings: convex partitions and their local properties, Environment and Planning B, Vol 24, 761-781. pp.767-768.

空间组构（Spatial Configuration）

空间组构指某个整体空间结构之中相互依存的各个局部空间之间的复杂关系。
Spatial configuration means a set of complex relationships between spaces all of which are interrelated in an overall spatial structure.
来源：
Hillier, B., Hanson, J., and Graham, H. (1987), Ideas are in things: an application of the space syntax method to discovering house genotypes, Environment and Planning B: Vol 14, 363-385. pp.363;
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. p1, p23

空间设计网络分析(Spatial Design Network Analysis(sDNA))

空间设计网络分析关注城市网络和交通系统，包括 车行、室内外人行、自行车以及公共交通系统。该软件跨越了交通规划、城市设计和建筑设计之间的鸿沟，

为建成环境中更好的空间网络设计提供基于实证的分析。由卡迪夫大学的艾兰西尔冉迪尔等编写。

Spatial Design Network Analysis focuses on urban networks and transport systems: networks for vehicles, pedestrians (indoors and out), cyclists and public transport. sDNA spans the gaps between transport planning, urban design and architecture to provide an evidence base for the design of better networks in the built environment. Created by Alain Chiaradia at Cardiff University.

来源：

Cooper, C., Chiaradia, A., Webster, C. (2016) Spatial Design Network Analysis software, version 3.4, Cardiff University.

空间的围合度（Spatial Enclosure）

空间围合度不是根据空间本身，而是根据限定空间的物质形态，去描述空间。这建筑领域描述空间的最普通方式。

Spatial enclosure describes space by reference to the physical forms that define it rather than as a thing in itself, which is the commonest architectural way of describing space.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp. 19

空间可持续发展（Spatial Sustainability）

空间可持续发展重点关注城市空间的几何规则和组构构成规律。自组织的城市就其本身而言，其普遍性的空间形态也对可持续发展有所贡献。更确切地说，句法研究揭示了城市的普遍性的双重结构：一是不同规模的中心彼此相连，构成了前景网络；二是绝大部分的住宅空间构成了背景网络。这两部分网络彼此交织，由社会经济活动的互动而形成的，同时也源于出行交通所消耗能量的最小化的需求，我们称之为普遍的可达性，即从系统中所有场所到达其他所有场所的可达性。

Spatial sustainability focuses on the geometric and configurational ordering of space in the city. It raises the possibility that the generic spatial form of the self-organised city in and of itself contribute to sustainability. More precisely, the dual generatic form of the city brought to light by syntax, as a foreground network of linked centres at all scales set into a background network of largely residential space,

seems already to be created by the interaction of economic and social factors, against a background of the minimisation of the energy required for movement through the creation of what we might call general accessibility, that is the accessibility of all points in the system to and from all others.

来源：

Hillier, B. (2009),Spatial sustainability in cities: organic patterns and sustainable forms. In: Koch, D. and Marcus, L. and Steen, J., (eds.) Proceedings of the 7th International Space Syntax Symposium. (pp. p. 1). Royal Institute of Technology (KTH): Stockholm, Sweden.pp. k01.2-3.

星型模型（Star model）

星型模型是一种根据标准化角度选择度（NAchoice）和标准化角度整合度（NAintegration）研究城市的方法，并根据城市空间结构去探索这些变量所代表的内涵。纵轴线上的高低点分别是某个城市的标准化角度选择度均值（高点）和标准化角度整合度均值（低点）；横轴线上的左右点分别是同一个城市的标准化角度选择度最大值（高点）和标准化角度整合度最大值（低点）。每个变量取标准分数，在 0 上下浮动，最小的负值位于中心，而最大的正值位于边缘。因此，标准化角度整合度均值和最大值分别表示背景网络和前景网络的可达性。而标准化角度选择度均值和最大值表示街道网络的结构特征：均值度量背景网络形成连续网络的程度，而非分隔为局部地区的程度；而最大值表示前景网络构成结构的程度，包括变形的或规则的网络。

Star model is a technique for seeing cities in terms of normalised angular choice (NAchoice) and normalised angular integration (NAintegration) all at once and at the same time to explore what the variables mean in terms of urban spatial structure. The high and low points on the vertical axis are the mean NAchoice (high) and mean NAintegration (low) for each city, and left and right points on the horizontal axis are their maximum NAintegration (left) and maximum NAchoice 9right). Each measure is a standard score varying about 0, with the negative minimum at the centre and the positive maximum at the edge.

So mean and max NAintegration show the ease of accessibility in the foreground (max) and background (mean) networks in the usual syntactic sense, while mean and max NAchoice index the degree of structure in the system: the mean NAchoice the degree to which the background network forms a continuous grid with direct connections, rather than being broken up into separate sub-areas, while maxNAchoice represents the degree to which

the foreground grid structures the system by deformations and interruptions of the grid.
来源：
Hillier, B., Yang, T., Turner, A., (2012) Advancing depthmap to advance our understanding of cities. In: Greene, M and Reyes, J and Castro, A, (eds.) 8th International Space Syntax Symposium. Pontificia Universidad Catolica de Chile: Santiago, Chile.

静态活动（Static Activities）

静态活动指局部凸空间中的活动，包括坐、站、甚至大型超市中局部出行活动等。
Static activities refers to activities within a localised (normally convex) space, such as sitting, standing (and in some studies, making mall, localised movements).
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp. 248-249

战略价值（Strategic value）

战略价值是穿越空间主体的所有轴线的整合度之和，但不包括那些穿过边缘的轴线。这种战略价值与公共空间中停留和非正式交流的人们的数量相关。
Strategic value is calculated by the sum of integration values of all axial lines passing through the body of the space, but excluding the ones merely skirting its edges. This strategic value correlates with the number of people choosing to stop and make informal use of the public space.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp. 123

街道段（Street Segment）

街道端是任意两两相邻街道交叉口之间的线段。
Street segment is defined as the segments between any pairs of street crossings.

来源：
Hillier , B. & Iida, S. (2005), Network and psychological effects in urban movement, In: A.G. Cohn and D.M. Mark (Eds.): COSIT 2005, LNCS 3693, pp. 475-490.

延伸性/环性（Stringiness/Ringness）

延伸性指空间的一维延伸。
Stringiness means the extension of space in one dimension.
来源：
Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.91

强联系与弱联系（Strong/Weak Ties）

强联系指彼此熟知的朋友关系，而弱联系指仅仅是面熟关系。弱联系是强联系的朋友团体与更广泛的社会之间的联系桥梁。
Strong ties refer to friends who tend to know one another, but weak ties means acquaintances who normally do not know one another. Weak ties act as bridges between localised clumps of strong ties and hold the larger system together.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.202

强/弱组织的建筑物（Strong/Weak-programme Buildings）

强组织的建筑物指许多不同类型的人必须都被安排到相同的交流界面，彼此之间的关系也被清楚定义；同时，空间组构必须确保每种交流界面具有正确的空间形式，所有的不期而遇必须避免。法庭是典型。相反，弱组织的建筑物允许大量的随机交通，其空间布局促进偶遇和交流。
A strong-programme building is one in which numerous different categories of persons must all be brought into the same interface space in well-defined relations, and meanwhile, spatial configuration must ensure that each of these interfaces happens in exactly the right way and that all other possible encounters are excluded. The court is a typical example.

In contrast, a weak-programme building is one having a hive of activity, with a high degree of apparently random movement and static encounter generated by its spatial layout.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. p198-201

结构（Structure）

结构指空间真实的抽象基因，即特殊现状的本质。结构不是整体性的抽象，不是漂浮在现实之上的空洞之物，也不是强加在现实之上决定性的抽象要素。结构来自于、且依赖于真实。
Structure is defined as the abstract genotypes of spatial realities, meaning the primacy of particular realities. Structure is not a global abstraction, floating in a void and superimposed on reality as an abstract set of determinants; it is both derived from and depends on reality.
来源：
Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.198-206

结构化的格网（Structured Grid）

结构化的格网指不同整合程度和可理解程度的空间以某种方式组合，从而构成某种模式，支持城市的功能和可理解性。本质上，不同街道和地区具有不同的空间整合程度和可理解程度，使得整个城市各部分彼此不同；而正是这种差异性，使得城市具备了结构。
A structured grid is one in which integration and intelligibility are arranged in a pattern of some kind, which supports functionality and intelligibility. Essentially, lines and areas are prioritised for integration and intelligibility to varying degrees in order to create a system of differentiation and it is this differentiation that we call structure in the system.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.268-269

超级格网（Super Grid）

超级格网是整合度最高的那些轴线，这构成了城市的主要结构，或其一部分，促进长距离交通。

Supergrid can be understood as the most integrated lines constituting the main urban structure, or a part of the overall grid of the city which acts as a facilitator of longer range movement.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.130; Read, S. (2005), Flat City: A Space Syntax Derived Urban Movement Network Model. In: Proceedings of 5th Space Syntax Symposium, 341-357. pp343.

对称性（Symmetry）

对称性是描述如下特征：如果 A 与 B 相邻，那么 B 与 A 也相邻。

Symmetry describes the property that if A is a neighbour of B, then B is neighbour of A.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.11

协同度（Synergy）

协同度指半径 3 的整合度与半径 n 的整合度之间的相关程度。这是度量某地区内部空间结构在多大程度上关联到它所嵌入的更大空间系统之中。

Synergy is a correlation between radius-3 integration and radius-n integration. It measures the degree to which the internal structure os an area relate to the larger-scale system in which it is embedded.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.99-101

句法（Syntax）

句法指基本元素、基本关联、基本操作所形成的基本组合中所蕴含的相互关联法则和结构。

Syntax is defined as a set of related rule structures formed out of elementary combinations of the elementary objects, relations and operations.

来源：

Hillier, B., Leaman, A., Stansall, P., Bedford, M., (1976) Space Syntax. Environment and Planning B, vol (3), 147-185. p.150

句法效率（Syntactic Efficiency）

句法效率用于度量空间网络在多大程度上以高效的方式运转。该变量是选择度与总深度之商。总深度可视为成本，即某个人从周边所有场所到达某个目的地所消耗的距离成本；而选择度可视为收益，即某个人不用离开某个场所就能遇到所有其他来自该场所的人们。因此，它度量成本与效率，体现为句法效率。

Syntactic Efficiency aims to measure the extent to which spatial network works in an efficient way. It is calculated by dividing choice by total depth, in which total depth can be treated as the kind of cost in that a person need to overcome all the possible distances to go to a certain destination from the surrounding places and meanwhile choice can be considered of as the kind of benefit in that a person living at one place need not go to other places, but can be encountered or watched by all others coming from the surrounding places. In this way, it is a measure of syntactic efficiency, a ratio of cost and benefit.

来源：

Yang, T. (2015) A study on spatial structure and functional location choice of the Beijing city in the light of Big Data. In: Karimi, k., Vaughan, L., (2015) Proceedings of the 10th International Space Syntax Symposium. Space Syntax Laboratory, The Bartlett School of Architecture, University College London. 101:4.

马赛克的立面（Tessellated Facades）

马赛克的立面指建筑物立面采用马赛克的米制方式表现。

Tessellated facades means a representation of façade as a metric tessellation.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp. 91-2

穿行性交通（Through-movement）

穿行性交通指从所有空间到达其他所有目的地空间的最短路径中穿越性的出行交通。穿行度可用于预测穿行性交通的潜力。

Through-movement refers to the movement passing through on shortest routes from all points to all other points in the layout.

来源：

Hillier, B., Burdett, R., Peponis, J., Penn, A. (1987), Creating Life: Or, Does Architecture Determine Anything? Architecture et Comportement/Architecture and Behaviour , 3 (3) 233 - 250. pp.237

到达性交通（To-movement）

到达性交通指从所有空间到达某个目的地空间的出行交通。整合度可用于预测达到性交通的潜力。

To-movement refers to the movement to a space as a destination from all others.

来源：

Hillier, B., Burdett, R., Peponis, J., Penn, A. (1987), Creating Life: Or, Does Architecture Determine Anything? Architecture et Comportement/Architecture and Behaviour , 3 (3) 233 - 250. pp.237

拓扑半径（Topological Radius）

拓扑半径等价于拓扑深度，用于选择距离起始空间的某个拓扑深度之内的所有空间。例如，半径 3 是用于选择距离起始空间 1、2、3 个拓扑深度的所有空间。

Topological radius is defined as a 'cookie cutter' of a set of spaces within a fixed topological depth away from a root space. For example, it is used to selected all the spaces within 3 depths from a root space to be analysed.

来源：

Turner, A. (2008) Getting Serious with DepthMap: Segment Analysis and Scripting.pp.25

拓扑穿行度（Topological Choice）

拓扑穿行度指线段位于任意两两线段之间最少拓扑深度的路径的次数或概率，其中两两直接相交的线段之间为一步深度。

Topological choice measures how many topological-depth-minimising paths between every pair of segments, each of which lies on under the definition of topological depth, that is, the topological depth along the lines between two adjacent segments.

来源：

Hillier, B. (2009),Spatial sustainability in cities: organic patterns and sustainable forms. In: Koch, D. and Marcus, L. and Steen, J., (eds.) Proceedings of the 7th International Space Syntax Symposium. (pp. p. 1). Royal Institute of Technology (KTH): Stockholm, Sweden. pp. k01.3-4.

拓扑平均深度（Topological Mean Depth）

拓扑平均深度指从每个空间到其他所有空间的拓扑深度的平均值。

Topological mean depth is the average topological depth from each space to all others.

来源：

Hillier, B. (2009),Spatial sustainability in cities: organic patterns and sustainable forms. In: Koch, D. and Marcus, L. and Steen, J., (eds.) Proceedings of the 7th International Space Syntax Symposium. (pp. p. 1). Royal Institute of Technology (KTH): Stockholm, Sweden. pp. k01.3-4.

拓扑总深度（Topological Total Depth）

拓扑总深度指从起始节点，沿最少拓扑深度的路径，到达其他所有节点的拓扑深度之和。

Topological total depth is the cumulative total of the fewest topological depth paths between all pairs of nodes.

来源：

Hillier , B. & Iida, S. (2005), Network and psychological effects in urban movement, In: A.G. Cohn and D.M. Mark (Eds.): COSIT 2005, LNCS 3693, pp. 475 - 490. pp.482

拓扑总线段长度（Topological Total Segment Length）

拓扑总线段长度指沿最少拓扑深度的路径，从起始线段的中点出发，到目的地线段的中点的实际距离（或米制距离）。

Topological total segment length is defined as the metric distance from the mid-point of origin segment to that of destination segment along a fewest topological depth path.

来源：

Hillier , B. & Iida, S. (2005), Network and psychological effects in urban movement, In: A.G. Cohn and D.M. Mark (Eds.): COSIT 2005, LNCS 3693, pp. 475 - 490. pp.481

总深度（Total Depth）

总深度指从任何一个节点到其他所有节点的拓扑深度之和。

Total depth is defined as the sum of the topological depth from any a node to all the others.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.108

超越空间的整合（Transpatial integration）

超越空间的整合指分散个体的集合被转化为复合事物，却不考虑其时空的指代或地点。

Transpatial integration is defined as the summation of objects into composite entities without regard for spatio-temporal indicability or location.

来源：

Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.40

微小环（Trivial Ring）

微小环指同一对空间的两次连接。

Trivial ring is one which links the same pair of spaces twice.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.25

郁金香分析（Tulip Analysis）

郁金香分析特指示意性转弯角度的分析。例如，8 分法指如下这种分类法：第一个区间代表小于 22.5 度的转弯，第二个代表 22.5 度到 67.5 度的转弯，第三个代表 67.5 度到 112.5 度转弯，如此类推。1024 个区间分析可近似为 DepthMap 软件中的标准角度分析。

Tulip analysis is defined as the analysis of a list of diagrammatic turns. For example, an 8 bin tulip analysis means the analysis of this sort of categorisation: one bin for a turn of less than 22.5 degree, one for 22.5 degree to 67.5 degree, one for 67.5 degree to 112.5 degree and so on. An 1024 bin tulip analysis approximate standard angular analysis in DepthMap.

来源：

Turner, A. (2004), DepthMap4: A Researcher's Handbook, UCL. pp. 29-30.

两步逻辑（Two-line Logic）

两步逻辑指当你穿行在主要街道上能看到的某条街道时，下一条街道将使得你要么再次走出后街，要么走向某些重要的场所，如后街中较大的广场或较为重要的建筑。这意味不论你走到哪儿，总有某个空间节点，在此你可以看到你从哪儿来，将走到哪儿去。

When you pass down a line that you can see from the main grid, the next line will take you either out of the back area again or to some significant spatial event, such as a larger piece of space or a significant building, within the back area. This means that whereever you go, there is usually a point from which you can see where you have come from and where you next point of aim might be.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. p116-118

普遍距离（Universal Distance）

普遍距离指从一点到其他所有点的距离总和，这是对深度概念的普遍化推广，使得组构的概念成为分析的重点。

Universal distance is the sum of all specific distances from a node to all others, and it seems to be a generalisation of the idea of the depth that permits configuration to become the central focus of analysis.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.79

未组织的出行（Unprogrammed Movement）

未组织的出行源于两方面：一是不同占据空间的分布方式，伴随每个人在起讫空间之间的出行交通；二是这种分布方式与空间复杂体的组构的关联方式。

Unprogrammed movement follows from two things: first from the way in which the various occupation spaces are disposed in the spatial complex, coupled to the degree to which each actor as an origin and a destination for movement between occupation spaces; second, from how this disposition relates to the spatial configuration of the complex itself.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.255

临近性（Vicinity）

临近度，又称为接近度，采用距离起始轴线最近的 V 根轴线，消除角度的影响。

Vicinity, called proximity, seeks to eliminate the problems of angular relativisation by using only the closest V number of axial lines.

来源：

Dalton, N. S. (2005) New Measures for Local Fractional Angular Integration or Towards General Relitivisation in Space Syntax. In: Proceedings of 5th Space Syntax Symposium, 103-115. pp.113;

Dalton, N. S. (2006) WebmapAtHome. pp.11

虚拟社区（Virtual Community）

特定地区的虚拟社区是自然而然的共同在场模式，其成因来自空间设计对于出行方式的影响，以及其他与空间使用有关的方面。空间组构影响了空间的出行模式，而出行本事又是目前空间使用的主要形态。经由此，空间组构自然地确定了共同在场和共同感知的模式，这包括当地人、以及外来穿行其中的人们。这些都是虚拟社区的部分。

The virtual community in a given area is the pattern of natural co-presence brought about through the influence of spatial design on movement and other related aspects of space use. Spatial configuration influences patterns of movement in space, and movement is by far the dominant form of space use. Through its effects on movement, spatial configuration tends naturally to define certain patterns of co-presence and therefore co-awareness amongst the individuals living in the passing through an area. This area is called the virtual community.

来源：

Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. p141

视觉关系图（Visibility Graph）

视觉关系图指空间布局中彼此能互视的地点关系图示。

Visibility graph means the graph of mutually visible location in a spatial layout.

来源：

Turner, A., Doxa, M., O'Sullivan, D., and Penn, A. (2001) From Isovists to Visibility Graphs: A Methodology for the Analysis of Architectural Space. Environment and Planning B: vol 28, 103-121. pp.104

视觉关系分析（Visibility Graph Analysis (VGA)）

视觉关系分析是某个空间环境中，研究视觉关系的特征。该分析常常用于两个层面，即人看的眼睛高度层面，以及人行走的膝盖高度层面，这对于理解空间布局很关键。

Visibility graph analysis is to investigate the properties of visibility graph derived fro a spatial environment. The VGA can be applied to two

levels, eye level for what people can see, and knee level for how people can move which is critical to understand spatial layouts.
来源：
Turner, A., Doxa, M., O'Sullivan, D., and Penn, A. (2001) From Isovists to Visibility Graphs: A Methodology for the Analysis of Architectural Space. Environment and Planning B: vol 28, 103-121. pp.108-109

视觉悖论（Visibility Paradox）

视觉悖论指，当实际距离隔离程度最大化，就形成了线性形状，那么其视觉整合度则最大。例如，当所有元素按直线排列，那么所有元素都能一眼望穿，即该形态的视觉整合度最大；然而这些元素到其他所有元素的实际距离最大，那么实际距离整合度最小。
Visibility paradox means that the arrangement of elements in which metric segregation is maximised, that is, the linear shape, is also the arrangement in which visual integration is maximised. For example, If all elements are arranged in a straight linear line, the visible integration of the form is maximised because all the elements can be covered by a single sight line; however, the metric integration is minimanised because the metric distance from all elements to all others is minimised.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp. 266-267

视域分析（Visual Fields Analysis）

视域分析与视线关系分析一样。
Visual fields analysis is the same as visual graph analysis.
来源：
Turner, A., Doxa, M., O'Sullivan, D., and Penn, A. (2001) From Isovists to Visibility Graphs: A Methodology for the Analysis of Architectural Space. Environment and Planning B: vol 28, 103-121. pp.108-109

视线整合度（Visual Integration）

视线整合度计算从所有空间到其他所有空间的视觉距离。

Visual integration measures visual distance from all spaces to all others.
来源：
Hillier, B. (1996, 2007), Space is the Machine: A Configurational Theory of Architecture. Space Syntax: London, UK. pp.268

蒙古包（Yurt）

蒙古包是空间句法的案例，其内部缺乏空间分隔。
Yurt is a case study of space syntax. It is a Mongolian yurt lack of internal subdivisions.
来源：
Hillier, B. & Hanson, J. (1984), The Social Logic of Space, Cambridge University Press: Cambridge. pp.179