Space Node
Place

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The concepts of space, place, and node are taken from a lecture given by Niklaus Kohler at the University of Texas School of Architecture in the Fall of 2009.

An understanding of concepts of space, place, and node are fundamental to the creation of functional and beautiful spaces. These ideas are especially important in the creation of modern transportation hubs, as they need to combine the economics and desirability of “place” with the efficiency of high volume nodal flows.

Transportation and the Mega-Region

Western industrial and post-industrial history can arguably be redefined and analyzed based on the creation and development of new transportation methods. Canals were the modes of mass transportation, mainly of goods. These canals were followed by railroads, then motor-ways, and finally air travel. The development and form of urban and suburban spaces have also been influenced by the prevailing methods of transportation of the age.

A current trend of our globally connected society has been the creation of “mega-regions,” which are the amalgamation of numerous contiguous smaller zones. Examples of these zones are the continuous urban and suburban areas between Boston, New York City, and Washington DC, and the “Texas Triangle” between Houston, San Antonio and Dallas. The creation and development of these zones have been spurred by the availability of transportation networks that can connect labor and capital over relatively long distances.

The expansion of these mega-regions has also partially caused a shrinkage of previously prosperous areas as jobs and industry have relocated the better connected...
mega-regions. Mega regions continue to spur growth, while areas like Detroit, which are quickly losing lucrative industry, capital, and skilled labor, spiral into economic insignificance. According to Kohler, this discrepancy is evidenced in the fact that “the world’s 40 largest mega-regions, which are home to some 18 percent of the world’s population, produce two-thirds of global economic output and nearly 9 in 10 patented innovations.”

Apart from attracting industry and capital, these mega-regions are competing to attract the highly skilled and educated segment of the labor market, often described as the “creative class.” This college-educated segment of the population is increasingly moving into mega-regions and are drawn by access to transportation systems as well as a sense of place. Therefore there is a demand for the creation of spaces that both have a sense of place and have access to transportation nodes. The understanding of place and how it related to space and node will be crucial in creating urban areas that can attract the creative class.

Space

Architectural space is directly related to our perception of space and therefore perspective. This is only one of many differing ideas of space that date back to ancient Greece and span ideas of philosophy, physics, and architecture. In most regards, ideas of space can be divided into 2 camps; relative space which depends on the viewer, and absolute space, which is indeterminate of the viewer. Further distinctions deal with the phenomenology, or experience, of space and the structuralism, or characteristics of space are informed by the structure of a space. By determining which structures of space are collectively experienced in a positive manner, designers can begin to formulate rules that create a starting point for creating place within space.

Time is critical in understanding the changes and evolutions that occur within spaces and nodes and in how they can become places. Time, as well as space, also plays a significant role in constructing the notions of nodes and place. Space and time should be considered simultaneously to classify and create “nodes” and “places.”

Node

The concept of a node is another element that needs to be considered when discussing space and place. A node is a control point or intersection of 2 or more linear systems. (roads, railways, information, etc). Nodes are immaterial, representational points that describe flows along these systems.

While nodes are not physical constructions, they define and shape how people and systems flow through a space. Nodes operate within spaces and are constrained by their physical form. High speed automobile or rail nodes require more space to work efficiently than pedestrian nodes. The arrangement and density of nodes can reflect the use and character of spaces. Dense arrangements of nodes, as seen in older European cities, often facilitate social interactions, but the density itself is not what determines this likelihood of social interaction. Rather, the speed at which flows are
allowed to move through a node is what determines the possibility of social interaction. Social interactions occur in spaces where movement is at a pedestrian scale. Dense collections of nodes often operate at slower speeds because they were designed to function at a pedestrian scale. Dense connections of nodes that allow faster flows (automobile) do not facilitate social interaction. An example of this is a parking lot, where the nodal intersections of drive aisles are dense but do not foster any interaction.

Place

Like space, the concept of place has many differing definitions and constructions, from simply the naming of a space, to a collector and facilitator of collective memory. Most definitions of “place” refer to a space that is in some way different from other spaces. Niklaus Kohler notes that spaces that have a sense of place often share a number of similar characteristics:

- They are spaces for people and are often occupied
- They have multiple functions
- They are walkable
- They are sit-able
- They are intimate in scale
- They are safe
- They are spaces that encourage social theater.
- They are spatially and formally unique

What should be noted from this list is that all of these characteristics are those of pedestrian oriented space. Nodes do not operate at only at the pedestrian scale and speed. Here, one can either argue that either place cannot exist in spaces that are not pedestrian scaled, or the previous list of characteristics of space is not complete.

If the idea of place as receptor and channeler of collective memory is used as definition, then a broader section of spaces can be included in place. In this definition, the physical form of a space is not necessarily indicative of its ability to be a space but implies that place can be created anywhere as long as that the space has a significance to the community in which it exists. Even the most spatially banal and homogeneous space can become a place if there is a socially significant
event that occurs there. Take the modern high school for example. Most high schools are relatively generic architecturally and spatially, and have a collective memory that is unique to individual students, but generic when considering the entire population of the school. An event such as the high school shooting in Columbine, Colorado drastically increases the social significance and collective memory of a space. This event, without spatially transforming anything, instantly renders this space a "place" within the public consciousness. While all spaces can become places through the occurrence of a socially influential event, spaces can also become a place through a volume of interactions and events that occur there. Spaces that function at a pedestrian speed and scale foster these interactions and therefore become place in the public consciousness.

Place-Node

The combination of place and node into the idea of "place-node" becomes very important when dealing with transportation hubs where the space needs to function as both. The Bertolini place-node chart deals with the relationship between the two concepts. In the chart, place and node are viewed as different extremes of the same spectrum. The relationship is a continuum that creates interdependence between places and nodes in which both rely on each other to create effective transport hubs.

Unlike the Bertolini chart which considers place and node as two elements which exist on a spectrum and directly influence one another,
it is also possible to consider place and node as separate elements that operate distinctly from each other. In this context, node can be evaluated as one piece in the structure of a city, as seen in Kevin Lynch’s book The Image of the City. In his book Lynch defines five elements used to form urban space, one of which is Node. These elements themselves do not define place, but are the physical kit of parts of urban spaces, and they create the framework for spaces, and ultimately places, to exist.

Phenomenological ideas of collective memory and cultural significance become an added layer that exist on top, but independently of the physical structure of the space. These phenomenological characteristics can exist in any number of combinations of physical space because they are defined by those who occupy the space. They are developed organically as the space is occupied and used. Spaces that encourage a high density of use are the most likely to become places as the collective memory increases with use.

Another way this relationship can be interpreted is between dynamic flows (node) and static interactions(place). Spaces that are “node heavy” create an environment that is meant to be moved through, thus stifling social interactions and a creation of place. Spaces that are “place heavy” often are characterized by elements that slow flows in order to foster social interaction and therefore cannot funnel large numbers of people through them quickly. In the design of a transportation hub, finding the desired equilibrium between facilitating both flows and interactions through the space can determine how well it will function.

Conclusion

Space, node and place are central ideas when considering urban fabric. All design decisions incorporate these concepts and the way that they are incorporated will define many of the characteristics of the design, spanning both morphology and phenomenology. Space and time serve as the medium through which the character of place and the flows of nodes can exist. The understanding of the organization of nodes is the first step in creating place. Nodal density, speed, and scale further define parameters for the creation of place. The final step is the addition of the smaller phenomenological details, which are built upon the preceding decisions. Given current societal trends toward regions of the world that are both well connected and embody a sense of place, the transport oriented designs that deal with both the fast and slow simultaneously and in an effective way, will be the projects that are successful both commercially and socially.

Figures


03. http://learningfrommiltonkeynes.com/page/2/

References


02. ibid
