**Class Reflections for UP 494**

Written by - Arpita Banerjee, for Tuesday Session No. 2 (02-02-2021)

Session Name: *Introduction to R-Starting with Data*

Reflection Prompts:

* *What are the challenges associated with representing neighborhoods quantitatively?*
* *What are the benefits of using quantitative data to represent neighborhoods?*
* *What can we learn? What is likely to be missed?*

Write-Up:

After ruminating on what constitutes neighborhoods (the physical, spatial, social, cultural and the ideological), we came to the unanimous conclusion (although implicitly), that neighborhoods are distinct spatial units that have a unique significance for planning. Its significance is heightened at the local level, and being so, it impacts lives directly. The challenge of representing neighborhoods quantitatively is multifaceted ranging from how and when, to even why. Navigating through much of the ensuing confusion, we come to the domain of a very powerful programming language – R – one which enables us to rediscover quantification of demographic/spatial/neighborhood data without compromising the backbone of planning logic.

Neighborhoods and their heterogeneous communities intersect. Neighborhoods represent the physical manifestation of community life and communities embody the spirit of the spatial arrangement of the neighborhoods. They are both extremely porous, either is not a monolithic entity. They cannot be contained within physical boundaries or temporal limits. What particularly engages me is the prospect of what data we should collect for such levels. What should be the ambition of the planner, at the scale of such wonderfully incoherent, yet incrementally powerful spatial units? – Perhaps we need to root ourselves in smaller causes – as our lab suggests that has aided planning in the most mysterious, yet impactful ways – the making of oatmeal, for a community meeting. As much as I would like to engage in its consequences, the picture is much larger, grows incremental, and the far-reaching impacts of such little functions (or bits of analysis) can be very gratifying. Neighborhood analysis, as a discipline is like building blocks – both the problems and solutions evolve through minute, intertwined efforts.

Using a programming language for this class tells us a lot about what has been a challenge quantitatively – data structures and the analytical functions embody the constraints of traditional data handling softwares. If I look at my life before R, particularly the nights I engaged in manually sifting through data over insomnia-induced months, to match similarly spelled items from one excel sheet to another, to determine decadal population trends, neighborhood analysis – or in general, quantification of spatial information and analyzing them to reveal unique, interconnected insights - has hardly been feasible. What makes neighborhoods a more peculiar challenge is the absence of framework within which to operate. Absence of consensus on what constitutes a neighborhood, debates on its evolution from Perry’s assembly line model of reproducible puzzle pieces, which could be replicated to enmesh the entire city – to the spatial expression of culture & history that now characterizes neighborhoods, it is difficult to understand what needs to be probed into quantitatively. However, certain elements, such as population categories (age, sex, ethnicity, workforce participation, occupation, etc.) remain as tangible measures within the neighborhood. What makes neighborhood analysis interesting is the scope of intersectionality between different population categories – between the quantities of different identities within a neighborhood. This provides a frame of reference for understanding the neighborhood as a distinct entity with spatially localized social problems.

And as frames of reference evolve continuously, so do our rationales for analyzing them. Quantifying data is not about stripping a neighborhood of its character, it is about substantiating character with magnitudes. And with magnitudes come relevance, and relative importance – problems of great magnitudes inspire even greater problem-solving. Thus through this class, I believe we can open ourselves up to what neighborhoods can and cannot be – and what we, as planners can and cannot do – or mostly can, now with the revolutionary statistical tool R.