**Final Class Reflections for UP 494**

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Write-Up:

In UP 494 I was brought to face one of the most revered and feared programming languages in the world – R. However, I was not made to simply learn how to code in a particular language, I was also expected to understand, reflect, and situate myself within the body of work that would build my identity further as an urban planner or professional. I have imbibed replicable skills that I have applied throughout my coursework across all other courses. I have worked with data, in some of the most intentional ways possible, and I have also been able to discover how a compromise with some of the same intentionality can have drastic ramification for community efforts. Through this page on final reflections, I would like to discuss some of my efforts to unpack some of the lessons I have learnt this semester.

My project for UP 494 was based on an intersectional analysis of housing vulnerability. As much as I appreciated the possibility of an intersectional analysis I also realized how difficult it was to have a truly intersectional lens at understanding a problem. On multiple occasions I felt deeply inadequate in my ability to create a complex analysis. I have also come to appreciate the limits of my analytical imagination, which were very difficult for me to discover earlier.

R is an important tool for reproducing analysis across different scales. It is extremely powerful and I have been able to inculcate most of the skills that I have learnt n 494 across other courses – which is both a powerful emotion and a challenging one at the same time. I have begun to draw comparisons between the work I could accomplish earlier and the relative ease and smoothness which I can now navigate census data. It is unprecedented, but it makes me ponder a bit reluctantly over my earlier approach at doing things – I took approximately 20 times more the time and effort, but was I more intentional about what I represented? In our first UP 494 class, we were told that R will help us understand every little nuance of visualization and prevent us from replicating the biases present in preset Excel diagrams. I was thrilled at the fact that R asked me to select the color, the axes, the very dot sizes of the scatter plots, the labels and the font sizes when I created a visualization. It was most welcome, but as I began to use R more, and started recognizing the plethora of commands that I am not aware of, it made me wonder, what if R too, has presets? With presets come invariable biases.

One of the most exasperating experiences I have had this semester has been my tryst with graduated colour on simple feature maps. The maps show areas of higher concentration with light colours and lower concentration with darker colours. Being experienced in the vocabulary of urban planning visualization, I am well versed in the normative standards of choropleth maps and how the depth, saturation, intensity and contrast of certain visualizations are associated with our default perceptions of color. But when an R preset coloured a map showing minority concentrations over Chicago, with the opposite of my expectation, it made me acutely aware of how R also exercises presets. And therefore certain biases. It was impossible for me to understand the logic or complex architecture behind the grammar of R, what it belied was seemingly opaque beyond its sophisticated graphing capabilities and high-speed computational abilities. As I got deeper into conversations on such biases with computer science students who work in programming languages, I sensed an ethical unease that echoed across the cohort, an acknowledgement of reproducing not an apolitical technology, but a tool that could often exacerbate existing biases. But what does this mean for neighborhoods and neighborhood analysis I wondered? What seemingly apparent biases have I recreated through my analyses? I can’t help but should the responsibility learning more, with a lot more nuance about the preconditioned biases that these tools bring and reproduce with themselves. I hope that I take this curiosity further and try and engage more informedly in the project of information equity for communities that I hold so dear.