This research paper mainly focused on trying to correct selection bias problem with a new modeling approach. It introduces SAR model used in Lee, especially its empirical works by Lin(2019) and other models related to this topic. What really attracts researchers’ attention, in fact, is its importance to school policies. Once, the importance of peer influences is confirmed, it seems to become an evidence to support or oppose school policies such as tracking students’ abilities and so on. Applying Monte Carlo experience and using the Add Health data to show the effectiveness of this new research approach, researchers only find “ some weak correlation between students’ outcomes and the choices of friends in terms of unobserved characteristics. The new contribution and the advantage they offer over previous methods is to consider new model approach to fix disturbance because of endogeneity.

However a few of questions pouring into my mind as I am reading: why does the paper still use the Add Health data as their empirical example? As time goes by, the gap between difference income levels is increasing faster, which may leads to inaccuracy to conclude the result. A better improvement might be choosing a data set that is continuously recorded. Why do researcher conclude that “they only find weak correlations between students’ outcomes and the choices of friends in terms of unobserved characteristics based on results of GPA and smoking behaviors”? Why don't they observe factors other than smoking and GPA? Students’ choose of friends might based on the social network they actually act in, thus weak correlation might due to their similarities of outcomes. More evidences as well as reasons are needed in deep when students make friends not from the same “group”.

As an outsider of this research, it seems reasonable because when they “address the endogeneity and selection biases problem by specifying unobservable in the system of network formation and SAR models,” they can capture selection biases. Using Monte Carlo experiment (estimation) by random sampling, sample performances are closed to true values. Furthermore, by applying the grouped Gibbs sampler to sample the highly correlated parameters in the same group, it avoids the weakness of slow convergence due to high correlations or problem with mixing (10). Since some models used in this project beyond the scope of my knowledge, I have some trouble understanding the reason why they are applied in this scenario and how do they work accurately or properly. I definitely will enrich the additional knowledge when I start doing research.

My interest of social interaction starts off from far away. I am watching my friends or classmates all the time about their performances both academic and social related to their families. From my observation, students from middle class families usually have better performances not only because their parents are highly educated but also because the way their parents raise them. These parents can help their children setting their goals and realize them step-by-step. Almost all of my friends from such families know they will definitely earn at least master degrees in the future and have specific career goals. In other hand, parents with low-income levels might be anxious for how to “parent” their children, for they have neither time nor economic support to talk to their children or send them to extra after-school classes. Students from middle class families clearly know what do to during school life; moreover, they also know how to shine themselves to earn more opportunities. While students from lower class families have narrower social network because of common interests and other possible reasons due to lacking of pocket money, the other students have a larger circle of friends because of broader visions. In particularly, from my point of view, students who come from a family of doctors, lawyers, teachers or engineers behave more outstanding. Parents themselves experienced long process of effective learning as well as continuing learning new knowledge due to characteristics of their careers, which lead to their effective and efficient way of learning that affect children.

Hence, as a vital component to overall progress of student’s education, social interaction is crucial to be investigated, and is needed to consider more factors that might take an effect on students’ performance. Among what have been researched through the paper, except for broader classification such as race, age or mother education, in my opinion, we need to classify factors narrower, like time management, parents’ careers, time and money parents’ devoting on their children and so on.

Higher-income and more time spending on children gives them greater opportunities to be successful on education and their own developments. For example, my parents always talk to me that they feel the greatest pleasure when investing on my education since it is the best way to ensure my future. Most of my friends’ parents agree on this idea. It is excited to do such a research relating to social interaction since it is around my daily life but hard to explain.

For me, I have taken a number of courses of math, statistics, and applied math as my core academic interests. However, with diverse interests on other areas, I also took classes such as sociology, psychology, nutrition, architecture, art and others. I enjoy thinking of reasons behind behaviors, personalities and daily life as well as discussing them with my parents. Our regularly talking enhances my cognitive development and ability of critical thinking. With what I have learned from classes and what I will learn later, doing this research is a perfect connection between theories and reality, the goal why I choose my majors, and how I apply my experience.