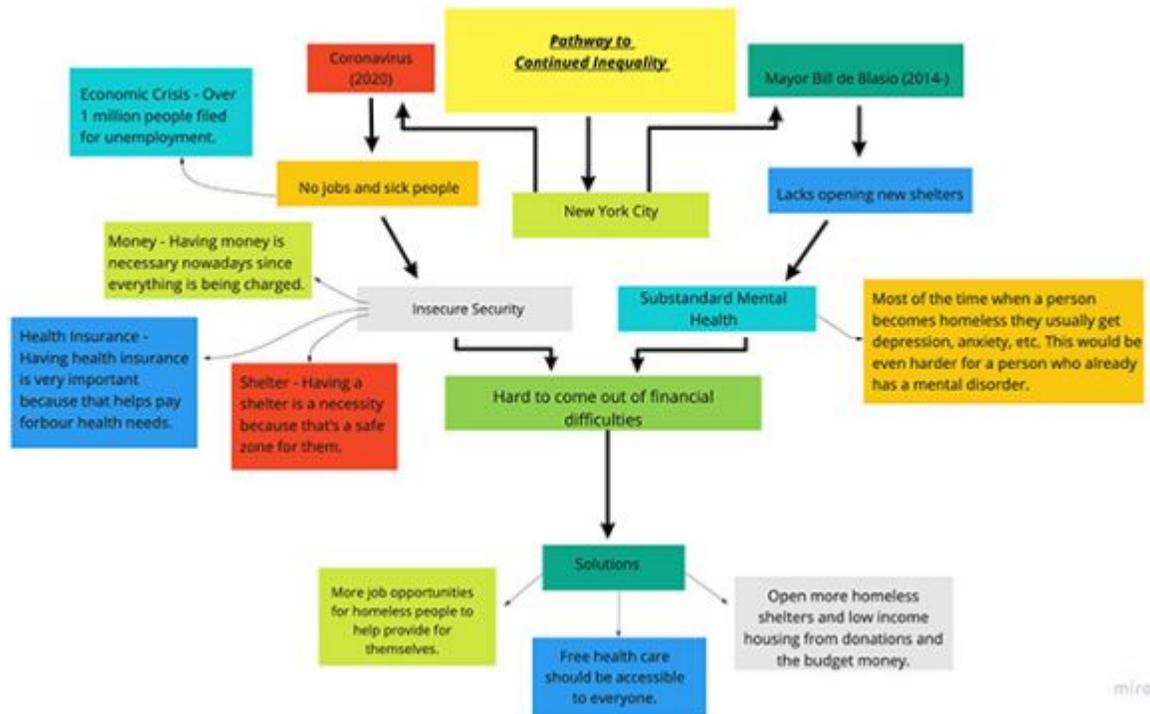# The Roger Lehecka Double Discovery Center

Getting community youth to, through, and beyond college

In this January 2021 issue:

1. Spotlight on Sandra C, DDC'23

2. Did You Ever Wonder…?

- **What are some of the leading causes of poverty in NYC City and what can be done on a policy level to address them?**

- **What is the connection between racism and gentrification?**

- **What has been the impact of NYC population increase on water consumption over the last four decades?**

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1. Spotlight on Sandra C., DDC'23

Sandra participated in *Exploring the Art of Debate*, a new DDC class led by Chiara Fuller, doctoral student in English Education at Teachers College, Columbia University. On January 16th, she competed in the New York City Urban Debate League's (NYCUDL) High School

Policy Tournament and placed second in the Beginner's team awards category and 6th in the individual speaker category! The event included seven teams and 14 debate scholars.

Congratulations Sandra!

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2. Did You Ever Wonder…?

These are some of the critical questions DDC students investigated as part of their final projects for two fall semester classes led by two DDC Fellows who are doctoral candidates at Columbia University: Monica Chan (*Data Science & Social Good*) and Laina Dawes (*Race, Class, & Social Justice in the Humanities*).

These classes were designed to build students' critical thinking and research skills. Students thoroughly researched their topics, drawing information from authoritative sources – academic papers, major publications and official government reports and statistics. They analyzed and evaluated relevant data, then developed thoughtful strategies as part of their recommendations to improve outcomes. They translated all results and recommendations into effective presentations, illustrated with easy-to-follow visuals – including plots, graphs, charts and mind maps.

Here's a short summary of their final projects and some of the feedback from the students and their instructors on this learning experience.

Pathway to Continued Inequality, **by Fatoumata D., DDC'24: What are some of the leading causes of poverty in NYC and the policies that could address them?**

In her project, Fatoumata addresses the persistent economic inequality in NYC, with a focus on two major factors: the pandemic and its dramatic toll on public health and the economy, and the lack of supportive services for homeless New Yorkers that significantly hinders their chances of ever rebuilding their lives. She illustrates her findings with the mind map above that shows associated sub-topics branching out from these central concepts. To read the mind map, start in the center and read out the key words along each branch to follow the progression of Fatoumata's findings.

The left side of Foutamata's map illustrates how the pandemic hit low-income residents the hardest with higher-than-average rates of infections and job loss, increasing already existing inequalities in NYC. For the week of January 13, 2021, positivity rate for Covid-19 in East Harlem was 7.39%, while in Lenox Hill/Upper East Side it was 2.08%. In June, close to 25% of Bronx residents were out of work and over 1.5 million New York City residents had filed for unemployment. Most of them were working in low wage sectors and in industries most affected by Covid-19 shutdowns.

Fatoumata's research also highlights the persistent homeless crisis and the dearth of supportive services such as safe shelters and affordable physical and mental healthcare that only make it much more difficult to overcome the trauma and agony of homelessness.

As Fatoumata's mind map shows, the economic devastation from the pandemic (on the left) and the lack of adequate assistance for NYC vulnerable populations (on the right) combine to create a large scale humanitarian disaster. She suggests three policy strategies to mitigate this crisis: job assistance for people who are homeless, access to affordable healthcare for everyone, and more low-income housing and safe shelters for vulnerable populations.

Racism and Gentrification, **by Miranda C., DDC'22: What is the connection between racism and gentrification?**

Miranda addresses some of the consequences of redlining, gentrification, and incarceration on generational wealth building in communities of color.

In the 1930s, federal housing policies deemed certain black neighborhoods high risks for mortgage lenders, stopping banks from lending to Blacks. The practice became known as "redlining." The only option left to finance their home ownership was through predatory loans, which often resulted in eviction and failure to build generational wealth through home equity.

The lack of generational wealth is exacerbated by gentrification as poor communities see the economic value of their neighborhoods increase with the influx of more affluent residents but are unable to afford the higher costs of living and often have to move out.

In addition to contending with the consequences of redlining and gentrification, poor communities must also grapple with the devastating impact of a much harsher justice system, which can result in minor offenses turning into lengthy convictions and significantly limit people's ability to earn an income and build wealth. *"This was the most shocking thing I learned with this project,"* says Miranda. *"I found that on an average day in fiscal year 2012, there were 12,287 inmates in city jails, 57% were black, 33% Hispanic, 7% white, 1 % Asian."* ([NYC by the numbers, NYC independent Budget Office](#)).

Her policy recommendations include: 1) implementing reverse redlining to increase access to home ownership, 2) building a justice system based on human rights in order to protect everyone, 3) expanding community services and eliminating jail time for minor offenses to reduce incarceration rates and 4) establishing living wage policies.

"This is really a college prep program," comments Laina. *"These students use very good sources based on facts, they present their own ideas and passion. These projects demonstrate that they are thinking critically, a necessary skill to successfully solve problems and make rational decisions."*

Water Consumption, by Emmanuel M., DDC'24 - How has NYC population growth impacted water consumption over the last four decades?

Between 1979 and 2019, NYC population grew from 7.1 to over 8.3 million residents, an increase of more than one million individuals. However, during the same period, daily per capita water use plummeted from 213 gallons to 118 gallons! What happened? Innovation in water-conservation technology! For example, plumbing is now much more efficient. Toilet flushing today uses about 1.6 gallons of water, compared to some 5 to 7 gallons in previous years. The Department of Environmental Protection has invested in major capital upgrades all over the City for water-saving programs in parks, schools, and public buildings. *"Reducing water consumption through water-saving techniques and appliances really helps preserve our rivers, lakes, bays, and estuaries,"* says Emmanuel.

"Students raised very interesting issues, I have learned a lot from their presentations. Their final projects show that they know how to formulate strong research questions, use fundamental tools to analyze data, and construct logical arguments. They also present their conclusions in a format that is easy to understand and visually appealing. These are very valuable skills for college and career", says Monica Chan.

In reflecting on their work at DDC during the fall semester, students shared the following insights:

Fatoumata D., DDC'24

The things I most enjoyed are the things that I learned. For example, there are certain boroughs, like the Bronx and Brooklyn, where there are so many people who need the most

help financially. I realized that there are many low-income households across the city and they should get more assistance if we want to achieve social equity.

Alexandra N., DDC'22

I learned the duties of a data scientist and that was quite surprising to me. I did not realize all the different steps they have to go through to analyze a dataset, make interpretations, and then develop strategic recommendations. My greatest takeaway from the class is that it is always important to understand what the data means in terms of the bigger picture as opposed to only focus on the graphs and numbers. There are stories behind the numbers. I also enjoyed the interactive activities in the class, especially when we discussed the different ways of visualizing data and we selected the most effective approach to communicate our findings for each issue.

Emmanuel M., DDC'24

I learned so much, including how to use spreadsheets and gather information from a huge database like NYC Open data website. I realize now how important it is to dig further into details because the first results can be misleading. I want to be a physician and this is a very rigorous field so all of the research skills that I learned will be very useful to me as I pursue my dream.

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