

From  
**BEHIND**  
the **CURTAIN**

**KSL CONNECTS | Fall 2018**

# TECHNOLOGY FOR

## 3 FREEDMAN CENTER LIBRARY PROJECTS

The Freedman Center for Digital Scholarship is the library's technological arm, and in the 12 years since its inception, it has expanded to over 2,700 square feet of functional workspace featuring state-of-the-art equipment. It has positioned itself as the driver of academic creativity and today, the library is not only changing the way research is conducted on campus, but through the work of library staff, it is beginning to harness the power of modern technology to address critical social justice issues affecting the surrounding communities.

### PROJECT #1: WHAT WE LEARNED FROM THE "FREEDMAN FELLOWS' SEXUAL ASSAULT KIT INITIATIVE" MAY REDUCE THE NUMBER OF FUTURE RAPE CASES

Rachel Lovell, PhD, and Misty Luminais, PhD, senior research associates at the Begun Center for Violence Prevention Education & Research and 2017-2018 Freedman Fellows, have collected data from over 500 backlogged Sexual Assault Kits from Cuyahoga County in the last 20 years. The project is part of a larger initiative—the Cuyahoga County Sexual Assault Kit Initiative—to investigate 5,000 untested rape kits. With funding from federal and local grants, the Begun Center is receiving a total of \$1.43 million to underwrite this project. So far, “the project has resulted in over 700 indictments.” (*Plain Dealer*, Rachel Dissell)

Although rape kits were often collected in the mid-1990s, DNA testing was not available until years later, and when available, the testing was expensive, with costs running upwards of \$5,000 to \$10,000 per kit. Since then, major improvements in DNA testing have reduced the cost and time to process the kit. It is now Ohio law to test current and backlogged rape kits.

**"THE FREEDMAN FELLOWSHIP IS GOING TO LEVERAGE OUR DATA INTO A WAY THAT WE WOULDN'T BE ABLE TO ANALYZE OTHERWISE."**

- Misty Luminais, PhD,  
Freedman Fellow

Using the Freedman Center's ArcGIS visual mapping software, Lovell and Luminais are exploring the spatial relationships between attackers, survivors, and the surrounding environment. By exploring the geographical data and making it available to the public, they aim to be a resource to researchers and the community, where historical data at this level of detail has not been seen before.

With the help of Kelvin Smith Library's digital learning and scholarship librarian, **Charlie Harper**, they were able to overlay newly plotted data on top of historical maps (Home Owner's Loan Corporation maps, 1936). Lovell and Luminais found geographic concentrations of untested backlogged sexual assaults in historically disadvantaged communities. This meant assault cases in those neighborhoods were often left unsolved and thus opened the possibility for future crimes.

Probing into this correlation more deeply, they discovered other alarming injustices in those same areas, including lead poisoning in children and lowered access to high-speed internet. These examples demonstrate how social disparities are

# GO

Freedman Center student assistants like Aliah Lawson help library staff provide on-site assistance with digital projects and printing services.

RESEARCH CAN BE USED FOR THE ADVOCACY OF COMMUNITIES EXPERIENCING DISRUPTION AND INEQUALITY.

geographically linked in certain economically disadvantaged communities that have had a history of underinvestment, segregation, and systematic neglect. The implications for public policy decision-making are significant.

“Our ultimate goal is to change the way we talk about rape, treat rape victims, and support them,” says Lovell.

“The Freedman Fellowship is going to leverage our data in a way that we wouldn’t be able to analyze otherwise. It is a way for us to engage with the community. More than text, visualization allows people to understand the data and how it impacts them. We want to make sure Clevelanders are engaged with this data,” says Luminais. They are continuing this work and are currently exploring the factors that might be contributing to survivors’ increased risk of rape as well as what can be done to make those communities safer for the residents who live there.



**Rachel Lovell, PhD**



**Misty Luminais, PhD**

*(Images Courtesy of Rachel Lovell & Misty Luminais)*

*Funding from the Freedman Fellowship also allowed Lovell and Luminais to employ Kristen Berg, a Mandel School of Applied Social Sciences PhD candidate, who has played an important role in the project’s progress.*

# TECHNOLOGY FOR GOOD

## PROJECT #2: FREEDMAN CENTER SUPPORT FOR UNDERGRADUATE STUDENT RESEARCH ON RACE AND EDUCATION IN CLEVELAND HEIGHTS

Migration patterns in Cleveland and its surrounding suburbs have always been a source of debate in city politics. Cleveland Heights is one such neighborhood that has experienced population changes in the last 20 years with significant effects on its public schools.

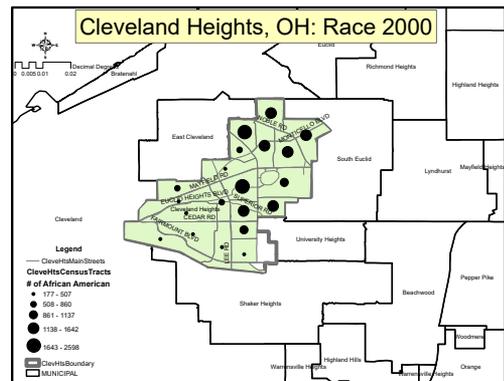
Brittany Rabb is a senior undergraduate student studying the relationship between race and education in Cleveland Heights. Using the Freedman Center's ArcGIS technology and working closely with Kelvin Smith Library staff, Rabb mapped the racial and economic data of the city since 1990 and found that the decline in public school performances corresponded to the changing racial makeup in the schools and in Cleveland Heights neighborhoods.

According to the Mandel School of Applied Social Sciences NEOCANDO database, Cleveland Heights is currently evenly divided among white and black households. However, the ratio between white and black students looks very different in the educational system, with black students making up around 80% of the population and white students making up only 20%. A number of reasons can account for this imbalance. School administrators interviewed by Rabb claimed aging populations, smaller families, and families that enroll their children in private schools in surrounding neighborhoods are possible reasons why there are fewer white students in the school system.

As a result, Cleveland Heights schools are struggling to keep up with the shifting demographic. They are seeing more poor and underserved student enrollments. With an increase in poorer student populations, schools are finding greater challenges, including: supplying food and clothing, addressing deficits in knowledge, and altering education styles to fit student needs, among many other issues.



*Brittany Rabb is a senior undergraduate student majoring in Sociology in the College of Arts and Sciences and minoring in Childhood Studies through the Schubert Center for Child Studies.*



Cleveland Heights census of African Americans in 2000. (Image Courtesy of Brittany Rabb)

# 3 FREEDMAN CENTER LIBRARY PROJECTS

## PROJECT #3: FREEDMAN CENTER TECHNOLOGY SUPPORT FOR STUDENT PROJECT TO PRODUCE 3D IMAGES FOR THE CLEVELAND MUSEUM OF NATURAL HISTORY

The vast majority of museum collections lie in rows of storage shelves behind closed doors. Museums select their best artifacts and specimens for display, as many objects simply do not fit into a museum's limited space.

Jacob Kordeleski, a junior completing his Classics capstone, has been working with library staff to produce 3D images of some of The Cleveland Museum of Natural History's most prized and tucked-away artifacts.

"I found some specimens function even better in a rotatable 3D format. One day, I hope virtual-reality exhibits become commonplace in museums," says Kordeleski.

Currently, 3D exhibits in museums are in early development. Kordeleski envisions a new virtual reality museum experience where people can visit museums from across the world. While virtual reality does not replace the experience of seeing artifacts in person, the educational value of virtual reality can be significant and can break down the barriers of time and distance.

"My project would not be possible without the resources I have in the Freedman Center. Photogrammetry, the method I use to generate my 3D models, is a complicated process with a definite learning curve. The computers in the Freedman Center not only have the software I need, but they perform much better than any other computer I have access to," says Kordeleski.

"The library staff has been helpful in telling me the best ways to do things, the best places to get data, the best ways to show my data. They know the software so well and they know what I'm trying to accomplish. They've been great in mentoring me to get to that point."

- Brittany Rabb, *Fourth Year Undergraduate Student*



(Photo Courtesy of Jacob Kordeleski)

### SELECTION OF THE 2018-2019 FREEDMAN STUDENT FELLOWS

The program helps students integrate new digital tools and technology into their research: <http://bit.ly/2D1fUWW>

**Leah Davydov** (*Graduate, PhD in Social Welfare*) will use Text Encoding Initiative (TEI) to create a digital edition of H.G. Wells' *The Invisible Man*.

**Tyrone Hamler** (*Graduate, PhD in Social Welfare*) will study pre-dialysis decision-making among elderly African Americans.

**Asha Ravichandran** (*Undergraduate in Classics*) will use Geographic Information System (GIS) to study how local resources may be more effectively used to serve homeless populations.

**Stormy Sweitzer** (*Graduate, PhD in Organizational Behavior*) will study the "accidental" formation of the world's largest women's motorcycle organization.