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This journal was produced by Jill Shah, Andrea Jurado, and Diane Huang.

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SARA CASTRO, [CC '19](#)
VINCENT LE, [CC '21](#)

**graduating interns*

The RCSS was established in 2014 with an endowment provided by Harvey Krueger (CC '61, Law '64). Our intention is to bring together students and faculty around issues involving science, service, and subjectivity. The proper study of such issues requires that all participants know what they are seeing, even if what they see is altogether new to them. We have found that this is difficult, but possible. As Rabbi Heschel says: "Our sight is suffused with knowing, instead of feeling painfully the lack of knowing what we see. The principle to be kept in mind is to know what we see rather than to see what we know." (Heschel, A. J., "The Prophets, an Introduction," Harper Torchbooks, 1962, p. xi.)

LETTER FROM THE DIRECTOR

Dear Friends of the RCSS,

I have the great honor and pleasure to share this amazing brochure with you. You will see that our undergraduate RCSS interns - coming from all undergraduate schools here on campus - have taken up my original offer to own their projects while helping the commons of our operation, and have done so with such grace and power that all there is for me to say is how proud I am to be their student.

How did we get here? First, we received a quasi-endowment in 2015 from my dear friend, Harvey Krueger CC '51, Law '54. After an initial expense from capital to pay for the transition of our work from the Earth Institute to the Center for Science and Society, we have initiated and funded all you read about here by carefully expending the annual yield from the endowment.

Until this semester. This semester we have received recognition, funds and welcomes to further collaboration, from a diverse set of colleagues.

We have received funds for student projects and student internships from advisory Board member Melinda Miller of the Center for Science and society; from David Madigan, outgoing VP of

**We find ourselves
engaging students and
faculty from the entire
university, all through
student initiatives.**



Leeza Hirt, CC '18, introducing Nobel Laureate and Columbia neuroscience professor, Eric Kandel. At the event, organized by Leeza, Prof. Kandel discussed his book, *Reductionism in Art and Brain Science: Bridging the Two Cultures*.

Arts and Sciences; from Casey Blake, Advisory Board member and Director of the Center for American Studies; and from Charles Borrok, a member of our Advisory Board and a friend to me, Amy and my students since I was the Dean of the College in the 1980s.

The result is profound: as our river of funding has lost its icy predictability, we find ourselves engaging students and faculty from the entire Currently our small RCSS presence is responsible for many public events including a presentation by Professor Eric Kandel, and for courses totaling 12 points of academic credit, almost 10% of what it takes to get a BA here.

We have only just begun.

Welcome to the RCSS!

DR. ROBERT POLLACK

*Director of the Research Cluster of
Science and Subjectivity*

ART AND MUSIC THERAPY AT TCC: LOOKING TO NEXT YEAR

BY VINCENT LE CC '21 AND EVA PEREZ-GREENE CC '19

Vincent Le and Eva Pérez-Greene will be leading projects in music and art therapy as a continuation of Eva's art therapy series at TCC.

Art Therapy

The first project will be led by Eva Pérez-Greene, and it will consist of art projects inspired by the history of art, tailored to the interests, needs, and capabilities of sub-communities, including but not limited to Dementia, Huntington's, and HIV/Discrete units, at Terence Cardinal Cooke. There will be two new projects each week, either in the recreational therapy room which Eva has used with residents in the past, or on the floors themselves. These projects will be incorporated into TCC's schedule of events so as to blend with the other offerings and give residents opportunities to do everything they would like with their time. An important part of this experience will be travelling to different floors and getting a feeling for the different challenges that patient populations, and even more essentially, individuals face at TCC.

An outgrowth of these student-resident interactions is a patient-centered journal, where residents and busy staff could read about other residents, and, hopefully, gain some mutual empathy.

Outside of the projects, which last less than a day, time will be spent with residents, addressing their

needs, hearing their stories, conversing, and communicating with staff on their behalf. Barbara Esgalhado, psychologist for the Discrete unit, will supervise this project. Dr. Esgalhado started an art collective in the past and has worked at Creedmore Psychiatric Center, out of which the Living Museum was born. An outgrowth of these student-resident interactions is a patient-centered journal, where residents and busy staff could read about other residents, and, hopefully, gain some mutual empathy.

Our cumulative project will be a collage of art, interviews and stories of the people of TCC who wish to share their voices.

Music Therapy

The second project will be led by Vincent Le, and will consist of a series of presentations of all genres of music. These presentations will be a combination of live music demonstrations and important works of music throughout history, and will be modified to fit the needs of each audience. This project will also be in conjunction with Professor Remez of Psychology, who will assist with more interactive music demonstrations from singing, listening, playing and other creative activities catered to each person.

Our cumulative project will be a collage of art, interviews and stories of the people of TCC who wish to share their voices. This will take the form of a physical journal for the private use of the TCC hospital. We also hope to have an anonymous version of this journal as a website, depending on their consent. In many cases, we recognize that certain medical conditions may prevent the affected person from effective communication. Instead, our focus will be on sharing the individual stories behind each person.

Through these projects and stories, we hope to learn more about the realities and effects of Huntington's Disease, HIV, and other physical and mental conditions on the lives of the people of TCC, and we hope to share something of ourselves with the people we meet along the way as well. We especially wish to explore the qualitative effects of music and art therapy on residents' happiness and well-being. ■

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Eva Perez-Greene is a rising senior in Columbia College, studying art history and premedical sciences. Eva has enjoyed being an intern in the RCSS since the Summer of 2017. In the future, Eva hopes to go to medical school and become a geriatrician or oncologist.



Vincent Le is a rising sophomore in Columbia College studying computer science. Vincent enjoys singing and playing the piano. He will be heading the music therapy program at TCC this summer.

REFLECTIONS FROM MY SUMMER AT TERENCE CARDINAL COOKE

BY EVA PEREZ-GREENE CC '19

What does it take for society to buy into another human being's flourishing?

Over the course of my time at TCC, it became obvious how much family, society, policy, and healthcare in general, shape people's lives and capabilities. I certainly don't think this is the whole picture, but interacting with institutionalized individuals reminds me of how fragile we are and how dependent we may become on others for our lives and basic freedoms. When people are sick or poor or both, society can either buy into their rights to do many things, so to speak, or not. At TCC many people are on Medicare which is very good. But you see how certain aspects of life, such as creativity, intellectual development, movement, and even socializing—those aspects which contribute to human flourishing—are less valued whenever an individual is not thought to be productively contributing to society. How can we ensure the flourishing of people dealing with all levels of challenges? In any case, thinking of how to make a more perfect, and perfectly equal, healthy society where everyone can contribute and flourish equally sounds dangerously utopic.

How can we balance patients' and providers' needs for intimacy at work?

For many individuals at TCC, the staff and doctors are their family. On the flip side, people who work in healthcare, especially in nursing homes or

facilities like TCC, spend very long hours with individuals who depend on them intensely, and they often lack the support to do all they would like to do as care providers. This leads to an enormous weight placed on care providers and, sometimes, I imagine, burnout. I saw this within the social work department at TCC. They were constantly understaffed and hiring new people for short periods of time. I think social workers are very unfortunately undervalued in a healthcare system which tries to care for the entire individual. I think that with more really committed, intelligent, and thorough social workers, there would be less burnout among doctors, nurses, and social workers, themselves etc. I wonder if doctors are trained to think of and work with social workers in order to help their patients flourish. At this point, it seems like these two groups are separated. Further, the notion of palliative care opens up possibilities for stronger relationships between doctors and social workers. ■

MARGINALIZATION IN MEDICINE

BY NECI WHYE CC '18 AND EWOMA OGBAUDU CC '18

Marginalization in Medicine: A Practical Understanding of the Implications of Race on Health

This semester we were blessed with the opportunity to expand the Sunday Dinner Series into much more. While this has been in the works for the past year and a half, this semester we finally saw the Marginalization in Medicine course and the conference of the same name come to fruition.

The course focuses on the health issues that underrepresented communities face and creates a space to facilitate and encourage discussion on how to address them. Topics include Drug Policy and Substance Abuse Politics, LGBT Health in Communities of Color, and Mental Health and Social Stigma.

Over the past year we have developed the syllabus, gone through revisions, conducted research, coordinated with Harlem community organizations, and found faculty advisors. *Marginalization in Medicine: A Practical Understanding of the Implications of Race on Health* is currently taught by Dr. Rishi Goyal in the Medicine, Literature, and Society department. Watching this course come to life has been one of the most fulfilling experiences I've had, and would not have been possible without the guidance and support of Dr. Pollack and the Center for Science and Society.

Our course is unique for several reasons. It follows in the footsteps of a previous course coming out of the Research Cluster for Science and Subjectivity: Life at the End of Life. We found it necessary that the course includes a service learning component, requiring students

to go out into the community and volunteer so they can benefit from practical work while applying the concepts learned in class to benefit the Harlem community. This initiative has allowed us to partner with incredible community organizations such as the Harlem Family Institute, which aims to improve the mental health of black and brown kids; Hip-Hop Public Health, which teaches kids in Harlem about a number of health topics; and Holyrood Episcopal Church/Iglesia Santa Cruz which is a sanctuary church that provides support for those in immediate danger of deportation.

Repeated histories of black exploitation and experimentation within the healthcare system are supported by common misconceptions that black people do not experience pain.

Our students are working to connect people of color in the Harlem community with health professionals and resources to improve their health in hopes of building the community's trust in health professionals and in us as Columbia students. This aspect is particularly important to me considering the lack of trust communities of color have in the healthcare system. Black patients consistently receive insufficient and oftentimes negligent treatment in comparison to their white counterparts. Repeated histories of black exploitation and experimentation within the healthcare system are supported by common

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misconceptions that black people do not experience pain. While we discuss these issues in class, the volunteering component provides students the agency to practically engage with and address them within the greater Harlem community.

Additionally, this course is significant in that we as students were able to advocate for and fill a spot we thought was missing in our education. We started our work because we realized these conversations were not being had in the pre-medical and science curriculums. The feedback from other students has been overwhelmingly positive thus far and we look forward to finishing the semester strong!

The Conference

The Marginalization in Medicine Conference was an all-day conference that aimed to address the social determinants of health, facilitate engaging discussions as related to inequalities in the current healthcare system, and provide students with opportunities to establish relationships with medical school admission representatives. We also hoped to improve the opportunities for pre-medical students of color in fields where they are underrepresented. One of many ways to address these issues is through empowering students of color that are interested in becoming health professionals and increasing awareness on these topics. I believe that we were able to accomplish these goals through the conference.

We were fortunate to assemble an incredible group of people to speak for this event. Dr. Georges Benjamin, the Executive Director of the American Public Health Association, was our keynote speaker. Other guest speakers included Dr. Olajide Williams, the founder of Hip Hop Public Health, the Chief of Staff of Neurology, and the Director of Acute Services at Columbia University; Dr. Rishi Goyal, head of the Medicine, Literature, and Society department at Columbia; Dr. Winfred Tovar, the



Community organization panel with participants from Harlem United, Harlem Arts Alliance, Gay Health Advocacy Project, and The Corner Project.

founder of MIMSI International; and Dr. Tawandra Rowell-Cunsolo, Assistant Professor of Social Welfare Science at Columbia. Additionally, we had an Overdose Training workshop, medical students panel, community organization panel, dean's admissions panel, and a panel featuring the Susan Smith McKinney Steward Medical Society.

These sessions offered student attendees diverse perspectives from various medical fields. Overall, the conference successfully met its goals, indicated by the overwhelmingly positive reviews received. 80% of students who attended and filled out the post-conference survey said they had not previously attended a conference of this nature that addressed these topics. All participants who filled out the survey found the conference necessary. We have included some quotes from attendees below:

"I really enjoyed the Overdose Intervention Training, I thought it was nice that it was more interactive than a traditional panel but just as informative even beyond the technical details we learned."

"It was very useful and inspiring for me, being a woman and a minority. I was inspired to continue along my journey towards medicine and to look at the field from a public health perspective."

“I took a lot away from it, I hope to work with marginalized communities and the conference showed me ways to do that. For example, with Dr. Williams I saw how he was able to blend two passions of his together to positively impact his community. Also, the conference allowed for moments of self-reflection and to learn how the institutions around us also contribute to these disparities in medicine.”

We would like to take this time to thank everyone who made these two incredible projects come to life. It would not have been possible without Dr. Pollack, Dr. Goyal, Dr. Aiken, the Research Cluster for Science and Subjectivity, and the Center for Science and Society. We are eternally grateful to you all for allowing us to realize our dreams. ■



Attendees with the "Marginalization in Medicine" T-shirts after the networking Mixer.



Neci Whye is a graduating senior in Columbia College studying biology and art history. She is passionate about addressing healthcare disparities especially those facing the black community. She aspires to work in marginalized communities as an emergency medicine physician.



Ewoma Ogbaidu is a graduating senior studying Columbia College studying biology. With Neci, he has addressed marginalization in medicine through creating a class, hosting a dinner series, and a student seminar. Ewoma plans to attend medical school and pursue a master's in public health.

STUDYING STARS

BY JOSEPH BELMONTE SEAS '18 AND
ANDREA JURADO CC'18

Unity in the Sky

I have always understood that there was some underlying fabric connecting us all--that I always shared something in common with both a rural farmer in Argentina, a shopkeeper in India, or a mine worker in China. Some basic things that humans have in common are physiological needs, such as drinking water, requiring sleep, and eating meals. One activity that further unites us all is looking up to the night sky and engaging in some self-reflection. Throughout time, humans all over the world have looked up to the stars and created stories of wonder, imagination, adventures of excitement and trial, and origin stories. By far this last category is most common, and the deeper I found myself in this constellation project, the more I found myself connected to people all around the world. The creation and use of constellations in origin myths is something shared across the world.

When I began this project, I had with myself a loose understanding of that feeling I have just described--that there was some thread that connected us all. By now, I understand that one manifestation or interpretation of that thread are constellations. Studying and researching both Ancient Egyptian Constellations, or Ancient Incan and Mayan constellations, I find that they were used as instruments of power, instruments of belief, as well as instruments of science! Farmers in Egypt were keen to use the yearly appearance of certain star formations to predict the flooding of the Nile river as well as to determine which crops to rotate or plant. Almost identically, Incas had built a series of rock formations that, when illuminated by the sun for the first time each year, meant that it was permissible to plant vegetation at that elevation.

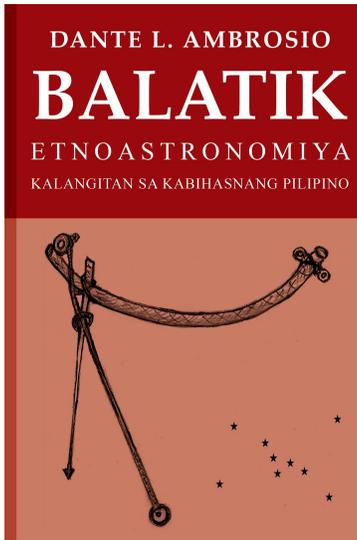
When I realize that two civilizations who, in one sense, lived in completely distinct worlds, made use of the same night sky in the same way, it makes me think the world a smaller place. Maybe if it isn't a smaller place, it's certainly a more connected one, and not in the way that the Internet connects us but in a more personal, grounded way. Something I wish I had studied (or been able to study) more at this university is the role constellations have played in the development of human civilization, or more broadly, concepts that connect humans across traditional boundaries such as borders, race, class, religion, and anything else someone who wants to divide people can conjure. Long after this project, I know I will still be looking at the night sky and thinking about everyone else looking up at it with me. I hope that the work we have done collectively on the constellations project also helps others consider just how alone they think they are.



A traditional star compass used by Hōkūle'a navigators during their sails to other Pacific islands. It divides the great circle of the horizon into 32 points, each represented by a star, that provide a system of reference for organizing directional information about the wind, current and ocean swells.

Photo taken by Joseph Belmonte from the Bernice Pauahi Bishop Museum in Honolulu, HI.

Finding Identity in the Stars



Balatik, written in Tagalog by Dante Ambrosio, the father of Philippine ethnoastronomy

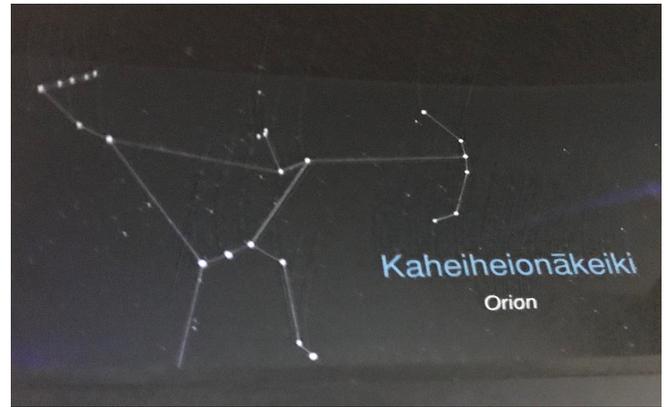
Cover art from the University of the Philippines Press website

Joe and I have been working on the Constellations Project since the Fall of 2016. He is an engineering student and I am a biology student. We both had no business taking on an anthropology project. I think that's what made this Constellations Project more important for us both. One aspect of the project that appealed to me was the chance to get to know my culture and represent my culture.

I enjoyed working on the Constellations project because it allowed me to reconnect with my culture. I took advantage of this opportunity to explore how the Filipinos viewed the night sky prior to colonization. I wanted to know what was native to the Philippines and what was a result of 333 years of Spanish colonization. I read an ethnoastronomy book by Dr. Dante Ambrosio, a Filipino ethnoastronomer.

Studying how the Filipinos viewed the night sky was a difficult endeavor because of the country's geography. It is an archipelago composed of 7,107 islands and the cultural practices of the Northern provinces are not similar to those of the South. Because of this, I posited that the interpretations of constellations by the native Filipinos in the North

would be different from the way the Southerners would interpret the stars. Much to our surprise, both Filipinos of the North and the South rely on the same star patterns to guide them in their agricultural practices. The interesting thing is that those stars are named differently -- some of them are based on myths unique to the natives of that specific region, while others are universally known deities but named differently possibly due to differences in the languages spoken in that region of the country.



Above: *Kaheiheionākeiki*, also known as Orion to the West. Interestingly, while Orion is depicted as a hunter in Hawaiian Constellation and most of the Western interpretations, the indigenous community of Jama Mapun in Tawi-Tawi in the Philippines see Orion differently. Instead, the Jama Mapun sees Orion's belt as a boar trap.

Photo taken by Joseph Belmonte from the Stargazing Planetarium at the Bernice Pauahi Bishop Museum in Honolulu, HI

All of these native interpretations of the sky have been replaced by names related to Christianity. Colonization is a familiar concept and it is difficult to explain the evolution of Philippine ideas without talking about how the Spaniards completely took over the identity of the native Filipinos. For example, the Pleiades, is a common star pattern recognized not only by the Filipinos, but also by the Inkas, Mayans and Hawaiians. In the Philippine province of Cotabato, the Pleiades was seen like a housefly and was given the name Kufukufu.

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When the Spaniards colonized the Philippines, its name was completely changed to 'Supot ni Hudás' (Judas' bag), but the interpretation and use of that same star pattern remained the same in Cotabato. I view this as a lack of dialogue between the indigenous Filipino culture and the Spanish colonizer views. Perhaps as a response to this imposition, Artemio Ricarte, a general during the Philippine Revolution against the Spaniards, started naming the constellations according to names of generals serving the Philippine army. He renamed the Polaris as Utakhasinto (Jacinto's brain), which I find ironic since he still renamed it in the language of his colonizer.

While we started this project with the question of whether or not different cultures interpret the night sky differently, I discovered a more

important gift that I could give myself and that is the gift of knowing more about my ancestors. The Constellations Project is at its infancy. We cannot make grand conclusions to answer our question yet, since we have only had the resources to explore cultures close to ours. There are a lot of other cultures that we did not explore, which may have different interpretations of the night sky. In so far as our endeavors have taken us, however, our studies bring us closer to the conclusion that native cultures view the night sky similarly and the random dots in the sky are not so random after all. ■



Andrea Jurado is a graduating senior studying biology in Columbia College with strong interests in virology and medical pathology. Her favorite biology classes at Columbia are Molecular Biology of Cancer and Applied Anatomy of Human Movement. She enjoys Virginia Woolf novels and faux calligraphy writing.



Joseph Belmonte is a graduating senior in the School of Engineering and Applied Sciences. He is from Bayonne, New Jersey, with strong interests in astronomy and Civil Engineering. He will be working for WSP in Newark, NJ starting in June 2018

MY FIRST TIME IN THE AUTOPSY SUITE

BY ANDREA JURADO CC'18

On February 9, I woke up early to attend a “Blue Tray” conference for pathology residents at Columbia University Medical Center. For an aspiring pathologist, this was an exciting opportunity and the adrenaline rush was probably what got me through the early hours of the morning.

During the “Blue Tray” conference, pathology residents presented select histological slides—biopsies of live patients and sections from organs of those who had passed away. Looking under the microscope and seeing pink and purple dots did not really elicit any strong emotions in me. In fact, at the cellular level, a mouse ureter section appears no different than the human urothelial sections. Perhaps it was youthful naïveté or plain unbridled enthusiasm for the novelty of what I was seeing that made me feel detached from the donors of these sections. Of the six cases I observed that day, only one particularly stood out. She was a 69-year old female who had a history of uterine cancer. She had a hysterectomy and was in remission for a couple of years, but the slide we were looking at was of an adenocarcinoma on her pelvis. Cancer still killed her.

After “Blue Tray,” the medical resident who was helping me get around directed me to brain cutting conferences. In the room, the air was thick with formaldehyde, a similar scent I remember from sheep-brain dissections, and I thought that the human brain looked an awful lot like the sheep brain. I giggled. I asked the resident if there are any readings associated with the brain cutting conference, since I don’t want to seem as if I have no idea what I am doing.

I was preoccupied with making sure I look smart enough that I had forgotten that I was not studying a sheep brain but an actual human brain. I was taken back to reality when the resident started discussing the patient’s medical profile; he was 56 years old and had chronic alcoholism and symptoms of dementia.

During lunch, I had the fortunate opportunity of meeting the autopsy director at CUMC Pathology after an email expressing my need of a mentor. Dr. Jay Lefkowitz talked me through my post-graduate plans and, of course, asked why I am interested in pathology. It always interests me why my physician mentors ask this question. If had said, “I want to become a pediatrician,” no one would bat an eye. Part of the reason why I want to become a pathologist is knowing myself. In my four years at Columbia, I have learned that I am more precise and accurate under non-stressful conditions. Through my volunteer experiences, I have learned to get close to patients, but still wonder about what goes on under their skin, why something went wrong, how something went wrong. In my personal life, I had learned that a clinical diagnosis can bring a patient peace of mind. It is a mathematical equation that has a simple solution.

Before leaving, I asked Dr. Lefkowitz what were the odds that, since I want to become a pathologist, I can observe an actual autopsy? And he said, “good.” Next thing I know, he was making a phone call and I was running back to the autopsy suite, putting on multiple personal protective equipment that were like jigsaw puzzles. As I entered the autopsy room, I saw the woman on the table. She’s yellow, jaundiced.

My medical school-bound friends told me that the first time they saw a cadaver, they were queasy, uneasy and dizzy. I was excited, elated and enthusiastic to learn. The pathologists had already made a transverse cut on the 70-year-old, obese, female patient who had passed away the night before due to what the physicians could only guess was a septic shock. The patient had a long-list of medical history, hence the need for an autopsy.

They began examining her small and large intestines, working through them like clockwork, step-by-step, so they don't miss anything important. They removed the intestines and put it in a metal bowl for weighing. Another cut, a deeper one, to remove the gastrointestinal and genitourinary tract. At some point during the examination, her hollow body was on one table and her internal organs were on the other table. The resident motioned for me to help her on something. She instructed me to hold the patient's left lung, so she could make a cut to separate it from the right lung. The patient had blackened lungs, consistent with heavy smoking. She had a green, string-like object wrapped around her liver which I was told was part of a previous surgery to remove her gallbladder, a cholecystectomy.

I will never forget the smell of the electric saw on the human bones. It smelled like burnt hair. On the patient's head was the third pathologist working her

The sounds of the saw cutting into the bones and the sound of the skin ripping from the skull of the 70-year-old woman are things that will forever be ingrained in my head. Meat shops and ripping cloth.

way into the patient's skull with another saw and what looks like an axe. The sounds of the saw cutting into the bones and the sound of the skin ripping from the skull of the 70-year-old woman are things that will forever be ingrained in my head. Meat shops and ripping cloth.

I learned a lot that day, and still, I have so much left to learn. I left the autopsy suite with a lot of knowledge in my brain and emotions in my heart. It amazes me that even though I am not an auditory learner, I hear the sounds of the autopsy as loud and clear as if I have participated in many of them before. Of course, the sight of the woman on the table was a stark reminder that I was not participating in a science experiment or a mere cadaveric dissection. It took me a moment to internalize that life is fleeting, and this woman was alive less than 24 hours ago. I could have met her on the subway or passed by her as I was walking along Broadway. She was alive, and now she is dead. *All came from dust and all will return to dust.*

One of my other mentors said something I will never forget, "Pathology deals with the body once the patient is no longer there." When she said this, I immediately agreed. The cells under a microscope, the brain and the tissues on slides hardly differentiate a patient. We are all the same at the cellular, tissue and organ levels. It is too early to dictate that I will settle in forensic or anatomical pathology but if I do, I will hardly interact with patients and know their life stories. I will not have small talks about my patient's family or what are their Thanksgiving plans; instead, I will only get snapshots of their life—what went wrong or what is out of the ordinary. But as I saw the overwhelming number of things that were happening in the parts that used to be the old woman, I felt it -- the sharp intense pang of death and of the sudden realization that she is human. And so am I. So, I held her hand and tried my best to not make her feel like she was alone. ■

MORE AT THE END OF LIFE

BY JENNY DAVIS BC '18 AND BRIGID CONNELLY GS'20

After taking part in the RCSS-TCC summer internship, Tess Cersonsky (SEAS '17), a former RCSS intern, felt that the experience of volunteering in the rich and endlessly eventful environment of the Terence Cardinal Cooke Health Care Center (TCC) warranted academic credit. When the idea of building a course around the Columbia-TCC partnership was met with disinterest from administration (Dr. Pollack was told, "Sitting with dying people is not an academic subject"), Tess created a syllabus for what would later be accepted by the American Studies Department as the course *Life at the End of Life: Palliative Medicine and Service*. Since then, the course has seen two semesters of fruitful community-based learning. Over the Fall 2016 and Fall 2017 semesters, the course has evolved in a variety of ways and, with much positive momentum, the third semester of "Life at the End of Life" in Fall 2018 promises new and exciting developments.

In Fall 2017, Jenny Davis, current Barnard senior and RCSS intern, took over Tess' duties as the teaching assistant for the course. With 15 students enrolled and deeply engaged in the coursework, *Life at the End of Life* saw its second semester of service learning and reflection, reinforcing the potential and power of student initiative. The course seemed to self-select a group of students who proved to be deeply committed to the core tenets of the class--exercising empathy, thoughtfully exploring themes around the end of life, and thinking critically about the limitations of rationalism in caregiving. In Fall 2017 we were lucky to have Dr. Craig Blinderman on board as the main instructor for the course. Dr. Blinderman is an Associate Professor of Medicine and the Director of the Adult Palliative Medicine Service at Columbia University Medical Center/New-York Presbyterian Hospital and

The syllabus will include more full length books that touch on issues of religion and spirituality, defining a well-lived life, the limitations of rationalism, and ways of experiencing space and confinement.

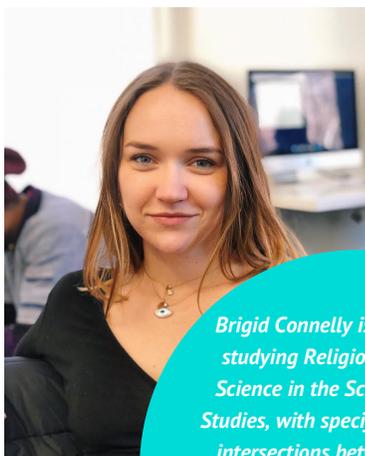
Co-Director of the Center for Supportive Care and Clinical Ethics in the Department of Medicine--needless to say, the clinical expertise that he brought to the course was incredibly valuable.

Brigid Connelly, a sophomore in the School of General Studies studying Religion and Political Science, will serve as the TA for the course in the Fall of 2018. Brigid and Dr. Blinderman will incorporate new texts that engage with themes that arise in student experiences of service, caregiving, and companionship at TCC. The syllabus will include more full length books that touch on issues of religion and spirituality, defining a well-lived life, the limitations of rationalism, and ways of experiencing space and confinement.

We hope that "Life at the End of Life," which has been a formative experience for Jenny, Brigid, and other students of the course, will eventually be recognized as an important component of the pre-medical curriculum and, more broadly, an asset, to any well-rounded curriculum. ■

A Glimpse into Fall 2018: Readings in "Life at the End of Life"

- "Where in this World is the Human Soul?" by Dr. Robert Pollack
- *Being Mortal* by Atul Gawande
- *When Breath Becomes Air* by Paul Kalanithi
- *Strangers at the Bedside: A History of How Law and Bioethics Transformed Medical Decision Making* by David Rothman
- *Strange Beauty: A Portrait of My Son* by Eliza Factor
- *Far from the Tree: Parents, Children and the Search for Identity* by Andrew Solomon
- *Madness and Civilization: A History of Insanity in the Age of Reason* by Michel Foucault



Brigid Connelly is a rising junior studying Religion and Political Science in the School of General Studies, with specific interest in the intersections between American political organization, communities of faith, and caregiving. Brigid will serve as TA in Fall 2018 for the RCSS-American Studies seminar "Life at the End of Life: Palliative Medicine and Service."



Jenny Davis is a graduating senior at Barnard College on the pre-med track, majoring in History with a concentration in Science and Society. She is interested in the intersection of environmental health and public health inequality. She is the Spring 2017 "Life at the End of Life" TA and also part of the intergenerational housing project.

EXCERPTS: A REVIEW OF TCC'S COMPLIANCE WITH RECOMMENDED PALLIATIVE CARE GUIDELINES

BY SARA CASTRO CC '19

On the first day of the internship at Terence Cardinal Cooke, we met with Dr. Lechich and we shared our goals for the internship. He gave us a tour of the institution and introduced us to some of the staff during morning report. [...] Towards the end of the day, he took two of the interns with him to Mary Manning Walsh and two of us stayed

behind. As we continued to explore the nursing home, we ran into Dr. B and Chaplain CP. It was this conversation with them that inspired my project. I mentioned to them that I was very interested in the power and role of relationality in medicine. CP mentioned the loneliness and lack of connectedness at TCC. Dr. B also mentioned the

lack of formed communities and how this affects the residents' mental health.

CP taught a course on the role of spirituality in the nursing home as part of the *Life at the End of Life* course taught at Columbia. I remember she had emphasized the importance of addressing spiritual pain for patients on palliative care. I went to the Pastoral Care office to speak with her about it and the role of relationality in palliative care. Her and MM shook their heads as they told me that palliative care was not really a thing at TCC. CP mentioned everybody at the institution should be on palliative care but that there were not enough resources to do so. She mentioned the need for a palliative care team and said that it would be very hard to have a robust program at TCC without it. She gave me a PowerPoint she made to conduct in-services for the staff to learn about palliative care. This PowerPoint was very straight forward and mentioned the importance of not only relieving physical pain, but also emotional, spiritual, and familial pains.

I was very surprised to hear that TCC was lacking in this section of the continuum of care since I believed it was an essential part of the nursing home. I chose to discover why a palliative care program at TCC had not been established and what it would take to create a more standardized approach to prevent people from falling through the cracks and not receiving the care they need.

Introduction

Once I determined what I wanted to focus on throughout the ten-week internship, I sought to answer the questions I had. I wanted to figure out where TCC stood in terms of palliative care and from what CP had told me, it was not very established. I was interested in learning more about TCC so I spoke to staff members, residents, and administration. Below are the three main questions I focused on.

1. What does it mean to be on palliative care at TCC?
2. Where is the institution now in terms of standardizing palliative care?
3. What happened to all of the past interns' projects and have they been sustainable?

It was difficult to get a lot of the history because of staff turnover and relatively new staff. It was also difficult to know a lot of the medical procedures initially because Dr. Lechich was not at TCC most of the time and we had not established a mentorship relationship with Dr. Martin. I figured out that the best way to get the information I was looking for would come through the past interns' papers. As I read most of the papers, I came to the conclusion that most if not all touched upon an aspect of palliative care from music therapy to advanced directives.

[..] In short, most of the projects were not sustainable. Later on in the paper, I will provide suggestions on how to make these projects more sustainable.

Part of the reason why I was so interested in reading these papers was because I was afraid of repeating something that had already been done in the past. I was very curious to know why palliative care was not established even though many interns had focused on it in the past. [...]

My Project

Despite reading all of the past interns' papers and doing research, I was still very confused as to what palliative care looked like at TCC and what its current status was. I expressed my confusion to Dr. Martin and she sent me a presentation she gave with a couple of her colleagues about establishing a palliative care program at a nursing home (attached below in Appendices). In this presentation, they include the following list of medications and treatments patients on palliative care may not

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benefit from: 1) Cholesterol medications, 2) Dementia medications, 3) Vitamins, Protein supplements, Minerals, 4) DVT prophylaxis, 5) Compression stockings, 6) Antibiotics (based on symptoms), and 7) Anti-diabetic medications. They mention these may not be cost-efficient, cause more pain and lead to unfavorable side effects (49).

After reviewing these recommended guidelines for establishing palliative care at a nursing home with Dr. Martin, we agreed to go through the medical records of all of the patients on palliative care in the month of July (excluding specialty hospital) and once I had reviewed the records, we would go through the patients and see where adjustments had to be made. For efficiency and productivity purposes, I screened for cholesterol medications, vitamins, protein supplements, and minerals, DVT prophylaxis, compression stockings, antibiotic therapy, anti-diabetic medication, and weights. I created the spreadsheet below for the 64 patients on palliative care in July 2017. The residents' names and room numbers have been replaced by numbers for privacy purposes. The full document is attached in the Appendices section.

The overall results of patients receiving these treatments are as follows. Seventy percent of the residents had an order for vitamins, minerals, or protein supplements. Thirty-four percent of residents had an order for weekly weights, 43% had an order for monthly weights or other, and twenty-three percent of the patients had orders for no weights. Only one resident had an order for a compression garment, two residents had an order for DVT prophylaxis, one had an order for antibiotic therapy, and 6% had orders for anti-diabetic medications. Once I created this master palliative care audit, I created separate spreadsheets for the patients who had orders for weights and for cholesterol medications.

The weights spreadsheets were sent to the dietary team and they were asked to reconsider the order for weights for those patients. Similarly, Dr. Martin emailed the physicians and nurse practitioners the cholesterol medication spreadsheet. She let them know that palliative care patients often do not need statins as they decrease risk factors over a ten-year period and as a result, asked them to review the cases, determine if the order for the medication is still appropriate, and discontinue it for those it no longer aligns with the goals of care. [...]

Read more of Sarah's project on the RCSS website. ■



Sara Castro is a rising senior in Columbia College, majoring in Medicine, Literature, and Society on a pre-medical track. She was a TCC volunteer through "Life at the End of Life". On campus, she's involved with the Student Organization of Latinxs, Latinx Heritage Month, MedFund, and Columbia University Emergency Medical Services.

THE INTERGENERATIONAL HOUSING PROJECT

BY SAMIA ABEDIN CC '19

Imagining a More Connected Community, Regardless of Age

The Intergenerational House (IG) aims to bridge the social disconnect between the youth and the elderly to mitigate the negative physiological effects of loneliness and to foster companionship, respect, empathy, understanding, civic engagement, and lifelong learning between both parties. Currently we imagine the establishment of this housing to be located in an institution such as Terence Cardinal Cooke Health Care Center (TCC), a skilled nursing facility located in East Harlem. The IG House would occupy a unit of the facility and serve as off-campus housing for undergraduate students. To relieve some of the financial burden managed by many students and to make the program more accessible to all, sponsored housing will be provided to those participating. All students in the program will be selected from the existing "At Your Service" Volunteer Program at Columbia, an organization that places volunteers with residents at TCC. Interested students will be filtered through a competitive application process, ensuring that those eventually living in the IG House will have already demonstrated an interest, commitment, and capacity to work with elderly and/or disabled populations. They will receive appropriate training in best practices for resident interactions. The rigorous selection and training criteria best enables the facility to achieve its principal goal, namely to develop relationships that will nurture and sustain both the students residing in the IG House and TCC residents.

Inspirations Behind the IG House

Fall semester of my sophomore year, I enrolled in the class "Life at the End of Life: Palliative Medicine and Service"—a course created by a

former RCSS student. In addition to providing a forum to discuss issues of how to maintain a quality of life and the role of companionship in end-of-life care, this class awarded students credit for volunteer service at Terence Cardinal Cooke Health Care Center (TCC). My experiences as a TCC volunteer were invaluable, shaped largely by the companion-like relationship that existed between my Long Term Companion (LTC) and me.

What could a then nineteen year old have in common with a seventy nine year old? Not much, except for the very thing we, as humans, all need. More love. Laughter. Compassion. And kindness.

Around this time, Columbia's newspaper, Columbia Spectator, published the article "Columbia has an empathy problem" after our emails began to flood with news of the passing of our peers. As a result, my Contemporary Civilization (CC) professor gave the class the kind of "radical tenderness" and "militant kindness" the article advises us to act by. And not because she spent the entire session talking to us, making sure all of us were doing okay. But because of the final project she assigned us; she asked us to think and act on how to better our Columbia community through the lens of our CC readings.

In thinking about how I could make a positive impact on campus, I thought back to my

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experiences with my LTC. Every weekend, I spent four hours with him. When I'd knock on his door, I'd find him lying on his bed, expressionless, his blind eyes fixed on the ceiling. No family member visits or calls. No friends to support him. No staff or residents to make him feel welcomed. His disability, depression, and loneliness had drained him of his will to live. I remember how difficult it was to connect with him at first. What could a then nineteen year old have in common with a seventy nine year old? Not much, except for the very thing we, as humans, all need. More love. Laughter. Compassion. And kindness.

All it took was my spending time with him, conversing and listening to him as he told great stories, for him to begin to smile more. Be more open to making friends. Have faith in himself and his life. It became clear that for him to feel happy and to feel his worth, all it took was to be surrounded by someone else who cared.

Similarly at Columbia, we are constantly surrounded by people, but so often feel by ourselves. And I think the author of the Spec article put it best when he/she/they stated that "a lot of us just don't give a shit about each other." And I began to wonder about the difference we'd feel if we did actually care. If we made ourselves available and freed our time to talk to others. If we shared our stories and listened to theirs with empathy. If we smiled while making eye contact with a stranger rather than just blankly staring.

My LTC taught me to understand storytelling and narration as a powerful marker for human connection. And so as part of my final presentation, I approached students on Low Steps and asked them to answer one question: What defines you? Their unique answers come together in my final video project for the class, which reaffirms: We are Columbia.

This commonality between Columbia students and TCC residents in which they can so easily feel lonely within their respective institutions despite longing for a more caring, more connected, and more compassionate society gave rise to The IG House Project. I felt inspired to bring together the youth and elderly in ways that would mitigate the negative physiological effects of loneliness. Living under the same roof would create a close-knit community that could not be achieved otherwise. I find that my volunteer shifts are typically filled with tending to the needs of the residents and assisting staff, which minimizes the amount of time for residents and I to spend time more casually, without time constraints. By living together, students, like I, and TCC residents could tailor their schedules to best fit each other's needs, allowing for more flexibility in the kinds of interactions that residents would be able to share. ■



Samia Abedin is a current third year student in Columbia College. She studies a wide variety of topics in human rights, health policy, public health, mental health, and end of life care under the interdisciplinary major track in Medicine, Literature, and Society.

