

THE SENIOR SYMPOSIUM

10 YEARS
CELEBRATING

SHARE YOUR PASSIONS

April 20, 2018

Sponsored by the
Center for Teaching and Learning



HOBART AND WILLIAM SMITH COLLEGES



HOBART AND WILLIAM SMITH
COLLEGES

Office of Academic and Faculty Affairs

April 20, 2018

Dear HWS Community,

For another year, we take stock of the scholarly and creative works of our students and get another opportunity to bask in their accomplishments, progress, and success as they prepare to embark on new lives of consequence. For the tenth year, this is an important opportunity to celebrate the learning, achievements, and hard work of our community.

We are fortunate to have this opportunity to see, enjoy, and revel in our student's intellectual passion in the Senior Symposium. This event represents what makes a liberal arts education at HWS so valuable—the engagement with faculty members, the interdisciplinarity and multiple focus approaches to tackling the pressing issues of the day, and the high standards and expectations of rigorous intellectual engagement. As the Interim Provost, I welcome you to join us in these presentations, discussions, and discoveries and I applaud the student presenters for being examples of what a Hobart and William Smith education can produce.

I also want to express my gratitude to my faculty and staff colleagues who have nurtured these students and their work throughout their time at the Colleges. Without your support, advice, and encouragement, this experience would not have been as successful. Finally, I appreciate those who have contributed their time, energy, and effort to making today so successful by presenting their work, moderating panels, attending panels, and providing a voice of congratulation and support.

Thank you all,



DeWayne Lucas
Interim Provost



HOBART AND WILLIAM SMITH
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Members of the HWS Community:

The *Senior Symposium* is an exciting event which reflects and honors the depth and breadth of engagement among Hobart and William Smith students in a diverse spectrum of academic and creative interests. It makes visible that which is often invisible: the long hours and hard work students dedicate to the intellectual journey during their four years at the Colleges. Most importantly, it provides an opportunity for students, under the guidance of advisors, to engage each other as teachers and learners.

As your Deans, we join with the Center for Teaching and Learning in applauding those who are participating in the tenth Senior Symposium as presenters. This is an important academic achievement that you now have as part of your legacy. We applaud the faculty and staff who will serve as panel moderators. The Deans also join in welcoming of all members the HWS community to this wonderful demonstration of student teaching and learning.

Sincerely,

Lisa Kaenzig, Ph. D.
Dean
William Smith College

Virginia Mansfield-Richardson, Ph. D.
Interim Associate Dean
William Smith College

Lisa Salter, Ph. D.
Interim Assistant Dean
William Smith College

Eugen Baer, Ph. D.
Dean
Hobart College

Chip Capraro, Ph. D.
Associate Dean
Hobart College

David Mapstone
Assistant Dean
Hobart College



HOBART AND WILLIAM SMITH
COLLEGES

Dear Hobart & William Smith Colleagues, Students, and Friends:

Today is the best day of the year.

For nine exhilarating hours, we will have the privilege of learning about everything from Argentina's Dirty War to harmful algal blooms; we will learn about education reforms happening around the world and in our own backyard; we will learn about the causes of the 2008 financial crisis, the pathogenesis of Parkinson's Disease, and the mathematics of Arthurian legend.

Today we will experience the liberal arts in action: from the faculty moderator who can find that one question that ties together the presentations on chemistry, music history and LGBTQ studies; to the member of the Board of Trustees who engages with a student about their work on gender equity in South Africa, and connects it with their own professional life; to the many friends, family, and members of the HWS and Geneva community who come together to listen, engage, and connect.

Today we will see our students at their very best: engaged, passionate, articulate, and clearly ready to step into the post-college world and lead lives of consequence.

And this year we celebrate ten years of this inspiring day. It has been our great privilege over the past ten years to host this event, and to learn from you, our students.

Thank you, and enjoy the day.

The Staff of the Center for Teaching and Learning:

Susan M. Pliner, Ed.D.
Associate Dean & Director

Ruth A. Shields, MAT; MS
Associate Director

Ingrid Keenan
Assistant Director

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Preparing Students to Lead Lives of Consequence.

ACKNOWLEDGEMENTS

The tenth annual Senior Symposium was made possible by the vision, leadership, and efforts of many in the Hobart and William Smith community:

Office of Academic and Faculty Affairs

Office of the President

Offices of the Hobart and William Smith Deans

Office of Communications

IT Services

Center for Teaching and Learning

Alejandra Castillo, Christen Davis, Susan Hess, Ingrid Keenan, Susan Pliner, Elizabeth Santin, Ruth Shields, Jamie Slusser, Gabriel Smith, Alexis Spann, Sam Vann

Abstract Writing and Presentation Workshop Facilitators

Brandon Barile, Amy Forbes, Amy Green, Amelia Johnson, Alex Kerai, Sarah Kloos, Kaylyn O'Brien, Emily Perkins, Makayla Pydych, Julia Sipos, Katie Stiffler, Jeremy Wattles

Sincere thanks are extended to the students, faculty advisors, faculty moderators, staff, alumnae, alumni, and all who have contributed to the success of this year's event.

RESEARCH SUPPORT AND AWARDS

Symposium students have received generous support for their academic projects from the following organizations, programs, and funds:

ABRCMS Outstanding Presentation Award

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Office of Academic and Faculty Affairs

President's Office, Hobart and William Smith Colleges

Padnos Family Endowed Internship and Travel Award

Roswell Park Cancer Institute Outstanding Elevator Talk

Roswell Park Cancer Institute Outstanding Scientific Talk

The Patchett Family Grant

William Smith Dean's Office

Young Memorial Trust

Senior
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Presenters

SENIOR SYMPOSIUM 2018 PRESENTERS

Presenter	Department/Program	Sponsor	Panel Time	Room
Adams, Cameron	Sociology	Jack Harris	12:20-1:15	Geneva Room
Adams, TJ	Psychology	Jamie Bodenlos	12:20-1:15	Geneva Room
Alexopoulos, Benton	Environmental Studies	Darrin Magee	11:15-12:10	Sanford Room
Arias, Maria	Education	Khuram Hussain	12:20-1:25	Sanford Room
Arroyo, Kelsey	Psychology	Jamie Bodenlos	4:05-5:00	Sanford Room
Benyo, Sarah	Health Professions	Scott MacPhail	9:05-10:00	Sanford Room
Berlin, Constantin	American Studies	S. Ani Mukherji	8:00-8:55	Sanford Room
Best, Rachael	Biology	Meghan Brown	8:00-8:55	Learning Studio 3
Bjornson, Kathryn	Sociology	Jack Harris	4:05-5:00	Sanford Room
Bower, Dilan	Economics	Warren Hamilton	12:20-1:15	Learning Studio 1
Briggs, Colin	Music	Charity Lofthouse	9:05-10:00	Learning Studio 1
Bruce, Molly	Sociology	Jack Harris	1:55-2:50	Geneva Room
Burns, Katherine	Biology	David Droney	10:10-11:05	Sanford Room
Caban, Christian	Education	Khuram Hussain	4:05-5:00	Learning Studio 1
Cabrera, Edisson	Architectural Studies	Gabriella D'Angelo	3:00-3:55	Learning Studio 3
Cantral, Lily	Environmental Studies	Beth Kinne	12:20-1:15	Geneva Room
Carey, Sasha	Sociology	Jack Harris	1:55-2:50	Geneva Room
Carey, Sasha	Sociology	Renee Monson	3:00-3:55	Learning Studio 3
Castillo, Alejandra	Spanish and Hispanic Studies	Marcela Romero Rivera	8:00-8:55	Learning Studio 1
Chenkovich, Teianna	Dance	Donna Davenport	10:10-11:05	Learning Studio 1
Cherry, Eleanor	Psychology	Daniel Graham	9:05-10:00	Learning Studio 1
Collins, Shannon	Environmental Studies	Darrin Magee	1:55-2:50	Learning Studio 1
Cook, Ellie	Sociology	Jack Harris	1:55-2:50	Geneva Room
Corbett, Sammons	Environmental Studies	Beth Kinne	12:20-1:15	Geneva Room
Cost, William	History	Matt Crow	9:05-10:00	Learning Studio 1
Czajkowski, Rebecca	Education	Audrey Roberson	9:05-10:00	Sanford Room
Davis, Robert	American Studies	S. Ani Mukherji	12:20-1:15	Learning Studio 1
Ely, Aidan	American Studies	S. Ani Mukherji	10:10-11:05	Sanford Room

SENIOR SYMPOSIUM 2018 PRESENTERS

Presenter	Department/Program	Sponsor	Panel Time	Room
Ely, Aidan	Political Science	DeWayne Lucas	8:00-8:55	Learning Studio 3
Feda, Amy	Education	Khuram Hussain	12:20-1:25	Sanford Room
Flaherty, Allison	Education	Khuram Hussain	12:20-1:25	Sanford Room
Friedberg, Brett	Economics and Environmental Studies	Tom Drennen	1:55-2:50	Sanford Room
Friedberg, Brett	Economics and Environmental Studies	Tom Drennen	11:15-12:10	Learning Studio 3
Garrett, Sarah	Sociology	Jack Harris	12:20-1:15	Geneva Room
Gaudet, Morgan	Architectural Studies	Gabriella D'Angelo	3:00-3:55	Sanford Room
Gorycki, Taylor	Centennial Center	Kaylyn O'Brien	9:05-10:00	Geneva Room
Greggs, Gemyra	Sociology	Jack Harris	1:55-2:50	Sanford Room
Gutman, Barbara	Sociology	Jack Harris	4:05-5:00	Sanford Room
Hammel, Peter	Music	Charity Lofthouse	12:20-1:15	Learning Studio 1
Hartnett, Julianna	Education	Khuram Hussain	12:20-1:25	Sanford Room
Harvey, Theresa	Biology	James Ryan	1:55-2:50	Learning Studio 1
Harvey, Theresa	Chemistry	Kristin Slade	12:20-1:15	Learning Studio 1
Hawes, Elizabeth	Psychology	Jamie Bodenlos	4:05-5:00	Sanford Room
Heaslip, Lucas	Environmental Studies	Darrin Magee	1:55-2:50	Learning Studio 1
Henkels, Jody	Sociology	Jack Harris	12:20-1:15	Geneva Room
Jacobs, Leah	Dance	Cadence Whittier	9:05-10:00	Learning Studio 1
Janik, Abigail	William Smith Dean's Office	Lisa Kaenzig	9:05-10:00	Geneva Room
Jiang, Yujun	Sociology	Jack Harris	3:00-3:55	Learning Studio 1
Johnson, Amelia	Political Science	Stacey Philbrick Yadav	9:05-10:00	Learning Studio 3
Kane, Lily	Psychology	Jamie Bodenlos	3:00-3:55	Sanford Room
Kloos, Sarah	Environmental Studies	Robin Lewis	8:00-8:55	Learning Studio 1
Knipper, Emily	Chemistry	Walter Bowyer	1:55-2:50	Learning Studio 1
Lambos, Peter	Writing and Rhetoric	Amy Green	1:55-2:50	Geneva Room
Lathrop, Jessica	Psychology	Julie Kingery	3:00-3:55	Sanford Room
Lathrop, Jessica	William Smith Dean's Office	Lisa Kaenzig	9:05-10:00	Geneva Room
Liu, Mengqi	Psychology	Julie Kingery	1:55-2:50	Geneva Room

SENIOR SYMPOSIUM 2018 PRESENTERS

Presenter	Department/Program	Sponsor	Panel Time	Room
Luce, Harrison	Anthropology and Africana Studies	Chris Annear	10:10-11:05	Learning Studio 1
MacCracken, Sophie	Education	Jennifer Harris	9:05-10:00	Sanford Room
Magnarelli, Allison	Sociology	Jack Harris	12:20-1:15	Geneva Room
Melvin, Sophia	Chemistry	Erin Pelkey	10:10-11:05	Geneva Room
Milmoe, Maureen	Psychology	Julie Kingery	9:05-10:00	Sanford Room
Mitschke, Maximilian	American Studies	S. Ani Mukherji	8:00-8:55	Learning Studio 3
Moffly, Davis	Sociology	Jack Harris	1:55-2:50	Geneva Room
Moore, Melissa	Sociology	Jack Harris	1:55-2:50	Sanford Room
Nelson, Jessica	Education	Khuram Hussain	12:20-1:25	Sanford Room
O'Brien, Emily	Sociology	Jack Harris	4:05-5:00	Sanford Room
Okun, Haley	Geoscience	Neil Laird	9:05-10:00	Learning Studio 3
Okun, Haley	English	Laurence Erussard	8:00-8:55	Sanford Room
Patel, Natasha	Political Science	Justin Rose	10:10-11:05	Learning Studio 1
Patel, Shweta	Biology	Mark Deutschlander	10:10-11:05	Sanford Room
Patmon, Luke	Philosophy	Karen Frost-Arnold	3:00-3:55	Learning Studio 3
Phillips, Aubrey	Architectural Studies	Gabriella D'Angelo	11:15-12:10	Sanford Room
Pomerantz, Lauren	Psychology and Mathematics	Daniel Graham and Yan Hao	11:15-12:10	Learning Studio 3
Proctor, Lauren	Sociology	Jack Harris	1:55-2:50	Geneva Room
Quay, Dylan	Economics	Kellin Stanfield	3:00-3:55	Sanford Room
Raleigh, Julia	Biochemistry	Kristin Slade	11:15-12:10	Learning Studio 3
Rhodes, Alec	Sociology	Renee Monson	1:55-2:50	Sanford Room
Riback, Dana	Religious Studies	Michael Dobkowski	8:00-8:55	Sanford Room
Robinson, Benjamin	Environmental Studies	Darrin Magee	1:55-2:50	Learning Studio 1
Robinson, Emily	Psychology	Jamie Bodenlos	4:05-5:00	Learning Studio 1
Rubio, Isabel	Political Science	Jodi Dean	8:00-8:55	Learning Studio 3
Ruthazer, Samantha	Sociology	Jim Sutton	4:05-5:00	Learning Studio 1
Santinelli, Maggie	Education	Jim MaKinster	11:15-12:10	Sanford Room
Scammell, Andrew	Dance	Donna Davenport	10:10-11:05	Geneva Room

SENIOR SYMPOSIUM 2018 PRESENTERS

Presenter	Department/Program	Sponsor	Panel Time	Room
Schreiber, Jordannah	Sociology	Jack Harris	4:05-5:00	Sanford Room
Seski, Andrew	Economics	Warren Hamilton	10:10-11:05	Geneva Room
Shenton, Megan	Sociology	Jack Harris	3:00-3:55	Learning Studio 1
Sipos, Julia	Sociology	Renee Monson	3:00-3:55	Learning Studio 1
Sipos, Julia	International Relations	Colby Ristow	9:05-10:00	Geneva Room
Slusser, Jamie	American Studies	S. Ani Mukherji	9:05-10:00	Geneva Room
Smith, Gabriel	Economics	Tom Drennen	10:10-11:05	Sanford Room
Smith, Miranda	Sociology	Jack Harris	4:05-5:00	Sanford Room
Stevens, Morgan	Sociology	Jack Harris	12:20-1:15	Geneva Room
Stevens, Morgan	Social Justice Studies	Donna Davenport	4:05-5:00	Learning Studio 1
Stewart, Mallory	American Studies	S. Ani Mukherji	10:10-11:05	Learning Studio 1
Storch, Katherine	Sociology	Jack Harris	3:00-3:55	Learning Studio 1
Stromback, Emma	Economics	Christina Houseworth	3:00-3:55	Learning Studio 1
Sullivan, Jennifer	Sociology	Jack Harris	3:00-3:55	Learning Studio 1
Sullivan, Jennifer	Sociology	Jim Sutton	8:00-8:55	Learning Studio 1
Teel, Kevin	Education	Paul Kehle	9:05-10:00	Learning Studio 3
Teel, Kevin	Education	Khuram Hussain	12:20-1:25	Sanford Room
Tokowicz, Chad	Environmental Studies	Beth Kinne	12:20-1:15	Geneva Room
Traore, Niame	Sociology	Jack Harris	1:55-2:50	Sanford Room
Tyler, Melissa	Music	Katherine Walker	8:00-8:55	Sanford Room
Tyler, Wilson	Environmental Studies	Darrin Magee	11:15-12:10	Sanford Room
Wang, Xin	American Studies	S. Ani Mukherji	8:00-8:55	Learning Studio 1
Wells, Charlotte	Philosophy	Carol Oberbrunner	4:05-5:00	Sanford Room
Wing, Divine	Sociology	Jack Harris	1:55-2:50	Sanford Room
Zirnkilton, John	Economics	Warren Hamilton	10:10-11:05	Geneva Room
Zirnkilton, John	Economics	Warren Hamilton	12:20-1:15	Learning Studio 1

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Geneva Room

Time	Presenters	Abstract Title	Department/ Program
Women's Impact			
<i>Moderator: Patricia Mowery, Associate Professor of Biology</i>			
9:05 - 10:00	Gorycki, Taylor	Women in Power: Impacts of Women Leaders on a Local, National and Global Scale	American Studies
	Janik, Abigail Lathrop, Jessica	PLEN: Women at the Table	William Smith Dean's Office
	Sipos, Julia	Manufactured Consent: Women in the Construction of Middle-Class Complicity during Argentina's Dirty War (1976-1983)	International Relations
	Slusser, Jamie	Art in the Women's March 2017-2018: Social Protests and Visual Culture	Centennial Center
	Questions & Answers		
The Building Blocks			
<i>Moderator: Keoka Grayson, Assistant Professor of Economics</i>			
10:10 - 11:05	Melvin, Sophia	Everything Is Awesome: Failure in Pursuit of Anti-Cancerous Analog Syntheses as Told through a LEGO Analogy	Chemistry
	Scammell, Andrew	Emotion and Control: Gender Construction through the Works of Anne Teresa De Keersmaeker	Dance
	Seski, Andrew Zirnkilton, John	Continuous Valuations of Bespoke Derivatives Using Smart Contracts and Blockchain Solutions	Economics
	Questions & Answers		

Geneva Room

Time	Presenters	Abstract Title	Department/ Program
What Works?			
<i>Moderator: Rebecca Burditt, Assistant Professor of Media and Society</i>			
12:20 - 1:15	Adams, Cameron Garrett, Sarah Henkels, Jody Magnarelli, Allison Stevens, Morgan	I Got 99 Problems and Poverty Is All of Them: The City of Geneva Anti-Poverty Initiative	Sociology
	Adams, TJ	Potential Concussion Recovery and Treatment Options for Athletes and Others	Psychology
	Cantral, Lily Corbett, Sammons Tokowicz, Chad	The Evolution of Native Fishing Rights in the Pacific Northwest: Protecting Culture and the Environment	Environmental Studies
	Questions & Answers		
Finding the (College) Balance			
<i>Moderator: Richard Salter, Associate Professor of Religious Studies</i>			
1:55 - 2:50	Bruce, Molly Carey, Sasha Cook, Ellie Moffly, Davis Proctor, Lauren	Full STEAM Ahead: Evaluating the "STEAM" Employment Community in Wayne and Ontario Counties	Sociology
	Lambos, Peter	Stretching Yourself Thick	Writing and Rhetoric
	Liu, Mengqi	Mindfulness in College Students' Lives	Psychology
	Questions & Answers		

Learning Studio 1

Time	Presenters	Abstract Title	Department/ Program
Representation			
<i>Moderator: Nan Crystal Arens, Professor of Geoscience and Senior Dean of Faculty</i>			
8:00-8:55	Castillo, Alejandra	<i>Cartel Land</i> and Its Misrepresentation of Citizen Self-Defense Organizations in Michoacan, Mexico	Spanish and Hispanic Studies
	Kloos, Sarah	Same Same but Different: Investigating Authenticity Claims of Vietnamese Cuisine in Cleveland, Ohio	Environmental Studies
	Sullivan, Jennifer	Double Bind: How Female Athletes Experience Opportunity and Objectification	Sociology
	Questions & Answers		
In Motion			
<i>Moderator: Katherine Walker, Assistant Professor of Music</i>			
9:05-10:00	Briggs, Colin	Thrashing About: An Examination of Metric Changes and Lyrical Meaning in the Music of Metallica	Music
	Cherry, Eleanor	Connecting Laban Movement Analysis and the Somatosensory Cortex: Neuromuscular Re-patterning for Phantom Limb Pain Syndrome	Psychology
	Cost, William	From the Revival to the Mob: Agitating for Change in the American West	History
	Jacobs, Leah	Creative Movement in Middle School and High School Classrooms	Dance
	Questions & Answers		

Learning Studio 1

Time	Presenters	Abstract Title	Department/ Program
Space, Place, Purpose			
<i>Moderator: Scott MacPhail, Associate Director Health Professions Counseling and Fellowship</i>			
10:10-11:05	Chenkovich, Teianna	Constructing Play in Performance	Dance
	Luce, Harrison	Businessmen Ambassadors: West African Entrepreneurs in Guangzhou, China	Anthropology/Africana Studies
	Patel, Natasha	Politics of Space: Organizing in "Uniquely Urban" Geneva, NY	Political Science
	Stewart, Mallory	A Desert in the Urban Rainforest	American Studies
	Questions & Answers		
Time Is on Our Side?			
<i>Moderator: Stacey Philbrick Yadav, Associate Professor of Political Science</i>			
12:20-1:15	Bower, Dilan Zirkilton, John	Not Your Financial Advisor's ETF	Economics
	Davis, Robert	Grateful Irony: The Merging of 1960's Counterculture and Business	American Studies
	Hammel, Peter	Text Painting with Time Signatures in The Dismemberment Plan's Work	Music
	Harvey, Theresa	Abnormal Circadian Rhythm in Bipolar Patients as a Potential Focus of Treatment	Chemistry
	Questions & Answers		

Learning Studio 1

Time	Presenters	Abstract Title	Department/ Program
If Change Happens			
<i>Moderator: Rob Carson, Associate Professor of English and Comparative Literature</i>			
1:55 - 2:50	Collins, Shannon Heaslip, Lucas Robinson, Benjamin	Harmful Algal Blooms in the Finger Lakes: Nutrient Loading and Proposed Mitigation Strategies	Environmental Studies
	Harvey, Theresa	Silencing Genes: Using RNA Interference to Change Behavior	Biology
	Knipper, Emily	How Do You Like Them Apples? A Comparative Analysis of Nicotine Content in Popular-flavored Shisha Products	Chemistry
	Questions & Answers		
When in College			
<i>Moderator: S. Ani Mukherji, Assistant Professor of American Studies</i>			
3:00-3:55	Jiang, Yujun Shenton, Megan Storch, Katherine Sullivan, Jennifer	A "Triple-Win" for Financial Aid Students: A Pilot Program for Community Work Study at HWS	Sociology
	Sipos, Julia	Rewards and Risks of Social Media Engagement: Variation by Race and Gender	Sociology
	Stromback, Emma	What Came First, the Paycheck or the Drink? Alcohol Consumption and Income	Economics
	Questions & Answers		

Learning Studio 1

Time	Presenters	Abstract Title	Department/ Program
Incarceration and Impact <i>Moderator: Matt Crow, Assistant Professor of History</i>			
4:05-5:00	Caban, Christian	Disrupting the School-to-Prison Pipeline	Education
	Robinson, Emily	Recidivism Risk Factors for Adolescent Sexual Offenders	Psychology
	Ruthazer, Samantha	Untold Stories of College Students with an Incarcerated Family Member	Sociology
	Stevens, Morgan	The Ins and Outs of Prison Gangs in America	Social Justice Studies
	Questions & Answers		

Learning Studio 3

Time	Presenters	Abstract Title	Department/ Program
Yes, It Matters			
<i>Moderator: Meghan Brown, Associate Professor of Biology</i>			
8:00-8:55	Best, Rachael	What Is in Seneca Lake and Why Does It Matter: A Study of Zooplankton Taxonomy	Biology
	Ely, Aidan	Knock Knock: The Legality and Constitutionality of Equipping our Domestic Police Force with Military Gear	Provost's Office
	Mitschke, Maximilian	"To Pimp a Butterfly" and The Weary Blues: Art, Race, and Class	American Studies
	Rubio, Isabel	What Can Social Reproduction Tell Us about the Ongoing Legacy of Slavery in the United States? An Afro-Pessimistic Perspective	Political Science
	Questions & Answers		
Winds of Change			
<i>Moderator: Charity Lofthouse, Associate Professor of Music</i>			
9:05 - 10:00	Johnson, Amelia	Advocating for Peace in Yemen inside and outside the Classroom	Political Science
	Okun, Haley	Trends of Extreme Wind Chill Temperatures across Canada and the United States	Geoscience
	Teel, Kevin	Lost in the Shuffle: America's 21 st Century Social Studies Curriculum	Education
	Questions & Answers		

Learning Studio 3

Time	Presenters	Abstract Title	Department/ Program
Complex Systems			
<i>Moderator: Lisa Kaenzig, Dean of William Smith College</i>			
11:15-12:10	Friedberg, Brett	Reducing Upfront Costs of Energy Efficiency and Installation through Securitization	Economics and Environmental Studies
	Pomerantz, Lauren	Simulations of Dynamic Routing Protocols in Neural Systems	Psychology and Mathematics
	Raleigh, Julia	Alpha-Synuclein and the Pathogenesis of Parkinson's Disease	Biochemistry
	Questions & Answers		
(In)Visible Identities			
<i>Moderator: Chris Annear, Associate Professor of Anthropology</i>			
3:00-3:55	Cabrera, Edison	Making the Ecuadorian Identity Visible in the Hamptons	Architectural Studies
	Carey, Sasha	Navigating the College Social Climate Based on Social Identities	Sociology
	Patmon, Luke	The Seen yet Unseen Black Male Figure: The Epistemic Position of the African American Male in 21 st Century America	Philosophy
	Questions & Answers		

Sanford Room

Time	Presenters	Abstract Title	Department/ Program
Gods and Heroes			
<i>Moderator: Christine de Denus, Associate Professor of Chemistry</i>			
8:00-8:55	Berlin, Constantin	A Controversial Monument: Robert E. Lee, Charlottesville, and the Lost Cause	American Studies
	Okun, Haley	What Are a Couple Thousand Men between Friends: Analyzing Mathematics in Arthurian Literature	English
	Riback, Dana	American Jewish Athletes: Immigrants to Heroes	Religious Studies
	Tyler, Melissa	Amazon, Pandora, and Hercules: Greek Myth in Popular Culture	Music
	Questions & Answers		
Children's Needs			
<i>Moderator: Mary Kelly, Associate Director of Education</i>			
9:05-10:00	Benyo, Sarah	Addressing HPV Prevention During Pediatric Sexual Assault Care	Health Professions
	Czajkowski, Rebecca	Teachers in Grocery Stores near You: Teacher Proximity and Perception of Student Attendance	Education
	MacCracken, Sophie	Yoga and Mindfulness in the Elementary School Curriculum	Education
	Milmoe, Maureen	Predicting Academic Achievement across the Middle School Transition	Psychology
	Questions & Answers		

Sanford Room

Time	Presenters	Abstract Title	Department/ Program
Mothers and Fathers			
<i>Moderator: Judith McKinney, Associate Professor of Economics</i>			
10:10-11:05	Burns, Katherine	Spending Maternity Leave with Your Mother: Post-Natal Care in Vietnam	Biology
	Ely, Aidan	"Young, Scrappy & Hungry": How Musical Representations of the Founding Fathers Challenge the Theory of Originalism	American Studies
	Patel, Shweta	Improving Maternal and Newborn Health in Rural and Tribal India	Biology
	Smith, Gabriel	Project Midwifery	Economics
	Questions & Answers		
Sustainability			
<i>Moderator: Alex Black, Assistant Professor of English</i>			
11:15-12:10	Alexopoulos, Benton Tyler, Wilson	Farm Economics of "HABS" Mitigation Strategies	Environmental Studies
	Phillips, Aubrey	Resilient Design: Housing Solutions in Geneva, NY	Architectural Studies
	Santinelli, Maggie	Just Food? Intentions and Reality of Finger Lakes Community Supported Agriculture	Education
	Questions & Answers		

Sanford Room

Time	Presenters	Abstract Title	Department/ Program
Community Collaborations: M.A.T.			
<i>Moderator: Khuram Hussain, Associate Professor of Education</i>			
12:20-1:25	Arias, Maria	Putting a Face on it: Collaborative Service Learning in the Geneva City School District	Education
	Feda, Amy Teel, Kevin	Collaborative Engagement: Creating a Curriculum	Education
	Flaherty, Allison Hartnett, Julianna	Collaborative Service Learning in the Geneva City School District: Investing in Change	Education
	Nelson, Jessica	Youth Leadership College Collaborative Evaluation: An Access Question	Education
	Questions & Answers		
Economic Security			
<i>Moderator: Justin Rose, Assistant Professor of Political Science</i>			
1:55 - 2:50	Friedberg, Brett	The Novo Model: A New Way to Commoditize CO ₂ To Reduce Emissions	Economics and Environmental Studies
	Greggs, Gemyra Moore, Melissa Traore, Niame Wing, Divine	The Taj Mahal of Geneva, New York: Economic and Financial Stability of the Geneva Community Center	Sociology
	Rhodes, Alec	Student Loan Debt and Post-College Earnings	Sociology
	Questions & Answers		

Sanford Room

Time	Presenters	Abstract Title	Department/ Program
Anxiety, Fear, and Empathy			
<i>Moderator: Jennifer Tessororf, Visiting Instructor of Economics</i>			
3:00-3:55	Gaudet, Morgan	Designing for Societal Scotophobia	Architectural Studies
	Kane, Lily	A Treatment Review for Children with Social Anxiety and Autism	Psychology
	Lathrop, Jessica	Reading Your Way to Empathy	Psychology
	Quay, Dylan	Fear the Minsky Moment: The 2008 Financial Crisis and Financial Sector Innovation	Economics
	Questions & Answers		
Perception			
<i>Moderator: Elana Stennett, Assistant Professor of Chemistry</i>			
4:05-5:00	Arroyo, Kelsey Hawes, Elizabeth	Cognitive Fusion Predicts Physical Functioning in College Students	Psychology
	Bjornson, Kathryn Gutman, Barbara O'Brien, Emily Schreiber, Jordannah Smith, Miranda	Trash Talks: Sustainability Practices and Perceptions of Geneva Residents	Sociology
	Wells, Charlotte	The Aesthetics and Art of Wine	Philosophy
	Questions & Answers		

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I GOT 99 PROBLEMS AND POVERTY IS ALL OF THEM:
THE CITY OF GENEVA ANTI-POVERTY INITIATIVE

Cameron Adams, Sarah Garrett, Jody Henkels, Allison Magnarelli and Morgan Stevens

In 2014, the poverty rate of Geneva rose to 25%, nearly 10 points higher than the NY state average, even though Geneva has only 12% of Ontario County's population¹. Geneva's socioeconomic demographics are changing, with most new businesses serving tourists and the college community, rather than city residents. There is persistent generational poverty that this gentrification has not addressed. As more people are left behind, the community as a whole is experiencing social displacement.

Since the City of Geneva does not currently have an anti-poverty initiative in place, our Sociology Senior Seminar research group has been invited by Sage Gerling, interim City Manager, to research various anti-poverty initiatives that have been successful in other communities. We will be looking at multiple theoretical models, including trauma-informed care and the collective impact model, as well as researching other existing models to see what might work for implementation in the City of Geneva. We also will be conducting surveys with numerous service providers in the community to see how they can be a resource and play a role within our proposed model. Our final deliverable will be a comprehensive analysis of the three anti-poverty models researched presented to Sage Gerling to help advise her on which model would be best for the City of Geneva.

¹ Genadmin. "City of Geneva Comprehensive Plan." *Cityofgenevany.com*, City of Geneva, 12 Sept. 2016, cityofgenevany.com/blog-post/final-version-comprehensive-plan/.

POTENTIAL RECOVERY OR TREATMENT OPTIONS FOR ATHLETES OR ANYONE WITH A HISTORY OR CONCUSSIONS

TJ Adams

This topic specifically interests me because it has the ability to directly affect me: though I have never technically been 'diagnosed' with a concussion there are probably many times throughout my 15 year football career that I've sustained one, and recently there have been connections between concussions and Chronic Traumatic Encephalopathy (CTE).

People with a history of concussions seem to have some of the same symptoms as people with dementia, and I am interested to see how concussions, CTE, and dementia all intertwine. There are programs that were initially for dementia that can be tailored for people with a concussion history. These programs are cognitive training programs, and I am interested to look and see whether they help those with a history of concussions.

FARM ECONOMICS OF “HABS” MITIGATION STRATEGIES

Ben Alexopoulos and Wilson Tyler

The Senior Integrative Seminar for Environmental Studies has chosen to focus on an issue that affects the health of Seneca Lake. Beginning in 2015, there has been a confirmed presence of Harmful Algal Blooms (HABs) in the lake; these blooms not only produce a thick layer of green algae on the water’s surface, but emit hazardous neurotoxins that can lead to health risks for humans and animals. Although the HABs issue is complex, recent research suggests the main cause is due to nutrient loading from watersheds flowing into Seneca Lake. The primary source of nutrient loading stems from the runoff of land-applied manure on dairy farms flowing into Seneca Lake.

Our goal for this project is to identify the practices and associated costs that farms in the region may implement in order to mitigate the effects of HABs. While the immediate economic impacts of the HABs issue may not be a primary concern for these farmers and rather an externality, improving nutrient management practices can help protect and support the local community and economy. Because potential changes may present a financial burden to farms, our job is to find economically viable solutions that will incentivize change. The final objective for this course is to take this information and spread awareness of HABs in efforts to inform farmers of economically and environmentally sustainable practices.

COLLABORATIVE SERVICE LEARNING IN THE GENEVA CITY SCHOOL DISTRICT; PUTTING A FACE ON IT

Maria Arias

How can students currently feeling displaced in their regular, required English courses become invested, and how can students become collaborators in this process? We draw on Ward and Wendel's community centered service model to frame our inquiry. Ward and Wendel identify collaboration as "done with peers in the community, and from that service, new understanding and learning arises for all parties involved. Service learning is not done for someone who needs the help of a college student or professor" (Ward & Wolf-Wendel, 2000). Ward and Wendel's model suggests that organizations create change in terms of the need, rather than just acting as "volunteers." We, the Master of Arts in Teaching (MAT) cohort of 2018, used this model as a basis for our projects. This panel represents two separate, but conceptually overlapping, projects representing the meaning and importance of collaborative relationships in the community, at two different Geneva sites and involve leadership training, grant writing, and curriculum development.

Our project team is working on a grant proposal that would enable funding for the class and expanding the curriculum for a full credit English course. My contribution to the project is a media piece: presenting student voices through video will highlight the extraordinary intellect that is being drawn from a hip hop class created because these students advocated for it. Media provides a way to showcase the students' passions, efforts, and thinking. Putting a human face on the project creates a real connection, which ultimately will contribute to creating empathy for the grant and course proposal.

COGNITIVE FUSION PREDICTS PHYSICAL FUNCTIONING IN COLLEGE STUDENTS

Kelsey Arroyo and Elizabeth Hawes

Cognitive fusion refers to the failure to distinguish ourselves and our experiences from our thoughts: humans tend to act on our thoughts as if they were “reality” instead of seeing them as merely cognitive events. Fusion with thoughts can result in behavior that is overly dominated by cognition and less influenced by direct experience in one’s environment. Cognitive fusion and its counterpart, cognitive defusion, are important processes in the psychological flexibility model that underlies Acceptance and Commitment Therapy (ACT). Higher levels of cognitive fusion have been associated with greater levels of distress and perceptions of physical pain in both older and younger adults.

It is likely that the inability to defuse from one’s thoughts can have a variety of physical and emotional consequences for college students, but little is known about this relationship. This study explored how cognitive fusion predicted physical functioning in college students while controlling for other related variables. Participants were 353 college students from a small liberal arts college in upstate New York. After informed consent was obtained, participants completed the following questionnaires: SF-36, Cognitive Fusion Questionnaire, Perceived Stress Scale (PSS-14), Luben Social Network Scale-Revised (LSNS), and Five Facets of Mindfulness Questionnaire (FFMQ). Participants also answered questions about sleep duration and quality on weekdays and weekends.

Using Hierarchical linear regression analyses, we found that after controlling for sleep, social support, mindfulness, and stress, cognitive fusion ($\beta = -.18$, $t = -2.34$, $p = 0.02$) was the only significant predictor of physical functioning in college students. The model was able to account for 8% of the variance in physical functioning, $F(1,253) = 5.47$, $p < .001$, $R^2 = .08$. Although a small amount of variance was accounted for by cognitive fusion, it was the only variable significant for health in this sample of college students. As it is the first study to provide evidence for cognitive fusion in health, more work is needed to understand how thoughts play a role in physical health among young adults.

ADDRESSING HPV PREVENTION DURING PEDIATRIC SEXUAL ASSAULT CARE

Sarah Benyo

Human papillomavirus (HPV) is the most common sexually transmitted infection in the U.S. Approximately 14 million people are diagnosed annually, and nearly half of all new cases occur in young people 15 to 24 years old.¹ For this reason, the Centers for Disease Control and Prevention and the American Academy of Pediatrics have established guidelines for vaccination of children and adolescents, and advise that health care providers address HPV vaccination during emergency sexual assault care.² Incorporating preventative healthcare at the time of emergency department presentation of post-pediatric sexual assault, including counseling on risks of HPV acquisition and the opportunity for vaccination, represents a unique opportunity to aid public health efforts to decrease incidence of HPV among young people.

The goal of my project was to examine the effectiveness of including HPV counseling recommendations as part of a sexual assault clinical pathway implemented in a pediatric emergency department. Healthcare providers use this clinical pathway as a “map” to guide and inform their care of sexual assault victims. These recommendations include discussing the risks of HPV, ascertaining vaccination status from the caregiver or electronic medical record, and offering HPV vaccination at the time of the visit.

It was found that the clinical pathway significantly increased HPV counseling and discussion of plans for vaccination. However, many barriers resulted in a failure to address HPV with 100 percent of the patients, including patient age and reliance on caregiver recall of whether or not the patient was previously vaccinated. Such variability in care, in spite of attempted standardization of practices surrounding HPV prevention, indicate a need for further studies of how to successfully merge post-sexual assault care with public health efforts.

¹ Centers for Disease Control and Prevention. *Incidence, Prevalence, and Cost of Sexually Transmitted Infections in the United States* (2013). Available at: <https://www.cdc.gov/std/stats/sti-estimates-fact-sheet-feb-2013.pdf>

² Crawford-Jakubiak JEC, Alderman EM, Leventhal JM. (2017) Care of the Adolescent After an Acute Sexual Assault. *Pediatrics*; 139(3):e1-e16.

A CONTROVERSIAL MONUMENT:
ROBERT E. LEE, CHARLOTTESVILLE, AND THE LOST CAUSE

Constantin J. Berlin

The American Civil War was the bloody dissolution of a nation. During the reconciliation after the war, the nation was reconstructed as a single entity. This process involved overcoming structural differences originating from the South's slave society and selective ignoring the legacy of slavery. Indeed, the denial of the war's core reason, slavery, is central to the Lost Cause narrative that emerged after the Civil War and continues to obstruct an accurate representation of the war's reasons.

My project aims to reveal the connection between the Lost Cause narrative and the 1924 monument of Robert E. Lee in Charlottesville, Virginia, through the analysis of historical primary sources. The research project aims to explain how national history is preserved through public monuments. I will also demonstrate how the Lost Cause narrative arose and how it used and altered the image of Robert E. Lee to promote its version of history.

Finally, I will assess the historical background of Charlottesville's monument by analyzing historical primary sources such as newspaper articles covering the unveiling ceremonies. By doing so, I will show how the monument of Robert E. Lee should be understood as an expression of white supremacy. Furthermore, I will assess the monument with regard to the Equal Protection Clause of the 14th Amendment and argue for its removal.

WHAT IS IN SENECA LAKE AND WHY DOES IT MATTER:
A STUDY OF ZOOPLANKTON TAXONOMY

Rachael Best

Plankton, some of the smallest members of Seneca Lake's foodweb, are important food sources for fish, sentinels of environmental change, and diverse in their forms and functions. For example, plankton are an important step in transferring toxicants, such as methylmercury (a neurotoxin), from sources low in the food web to fish. For my Honors thesis, I studied how the plankton composition of Seneca Lake influenced the methylmercury dynamics in the lower food web. I examined the trends in groups of plankton, as well as the seasonal conditions in the lake.

I found that plankton composition varied throughout the year—some groups were present for only part of the year, and over the course of the summer different groups dominated. The strongest predictor of methylmercury concentration was one particular plankton type: *Daphnia*. The more *Daphnia* present, the greater the total methylmercury. Water temperature was also a predictor of the methylmercury concentration, where warmer water conditions had greater total methylmercury.

My honors thesis demonstrates that knowing which types of plankton are present in Seneca Lake is important for understanding a dangerous neurotoxin that impacts the health of wildlife and humans. This semester, I created education materials focused on the plankton found in Seneca Lake to better inform area teachers and students. I designed a website and created printed materials for students to identify the plankton that they collect while onboard the Colleges' research vessel. People tend to care about the natural environment if they understand it and these materials are the first step in that process.

TRASH TALKS: SUSTAINABILITY PRACTICES AND PERCEPTIONS OF GENEVA RESIDENTS

Katy Bjornson, Barbara Gutman, Emily O'Brien, Jordannah Schreiber, & Miranda Smith

As concern for the changing environment grows, a myriad of practices and perceptions have evolved around sustainable living. Working with Jacob Fox from Organix Green Industries, we seek to discover how Geneva residents are working to, or not working to, conserve natural resources, and why.

In a diverse community such as Geneva, change depends on understanding how practices and beliefs manifest across different groups. Currently, Geneva is broken into ten distinct neighborhoods. To create a community dialogue, we will meet with focus groups composed of individuals in neighborhood association groups to ascertain their beliefs about sustainability and what they believe is possible to instill in the Geneva community. We will supplement these interviews with information gathered via surveys given door-to-door and at stores throughout Geneva.

Considering the additional costs associated with sustainable practices, we predict that practices and perceptions around sustainability will differ by socioeconomic background. Additionally, we predict individuals with higher levels of education will engage in sustainable practices more frequently, given their access to knowledge about environmental literacy and concerns. We hope to offer Organix Green Industries suggestions on which avenues to focus business efforts to most effectively elicit change in the practices and perceptions of the Geneva community.

NOT YOUR FINANCIAL ADVISORS ETF:
A STUDY ON MARKET CORRECTIONS CAUSED BY ETFS

Dilan Bower and John Zirnkilton

Today, markets function faster than ever, with computer-based exchanges able to facilitate an unimaginable number of new types of securities trades, using computers. These computer's with the help of market makers, have provided a market with smaller spreads than ever, with an average of more than 150 billion dollars' worth of equities traded per day in the U.S. markets alone.

Exchange Traded Funds (ETF) have become highly popularized, with retail to institutional investors attracted by their apparent portfolio diversification with the added benefit of lower transaction costs and tremendous amounts of liquidity. Today the average retail investor can trade hundreds of securities at the touch of a button though these ETF's. During times of market corrections these very same ETF's cause dramatic price divergences in many of their underlying assets.

THRASHING ABOUT: AN EXAMINATION OF METRIC CHANGES AND LYRICAL MEANING IN THE MUSIC OF METALLICA

Colin Briggs

I explore the use of shifting meter in the music of Metallica, and the way that these metric shifts interact with the meaning of the song conveyed by the lyrics. Metal as a genre utilizes many strange, unorthodox and excessively sophisticated meters in its catalogue; these meters are rarely fixed throughout an entire song. Bands like Dream Theater, Meshuggah and Dillinger Escape Plan have had their metric complexities studied comprehensively by music theorists, and these more extreme variants of heavy metal are most famous for these rhythmic complexities. However, few if any articles have been written on the use of shifting meter in metal music: that is to say, changes in meter from duple (two beats per measure) to triple (three beats per measure).

Examples of this relationship come from the albums *Master of Puppets*, *...And Justice For All*, and *St. Anger*. I have found that even though Metallica does not always utilize exotic, sophisticated or unfamiliar meters, they shift meters quite frequently, and that these changes tie into the overall meaning of the song. For example, in the song *Master of Puppets*, at the conclusion of each line of the verse, the guitar parts shift from a quadruple meter to a duple meter for a single measure, and then back again for the next part of the verse, a shift emblematic of the disruptive impact drug use can have on a person's life, which is the theme of the song.

FULL STEAM AHEAD: EVALUATING THE "STEAM" EMPLOYMENT COMMUNITY IN WAYNE AND ONTARIO COUNTIES

Molly Bruce, Sasha Carey, Ellie Cook, Davis Moffly, and Lauren Proctor

Working with Geneva 2020 and Finger Lakes Community College (FLCC), we are researching how to ensure that students are getting the necessary training for what local STEAM, Science, Technology, Engineering, Art and Math, employers seek in applicants. Jobs in the STEAM field provide generous salaries as well as financial stability as compared to other fields.

FLCC and Geneva 2020 wanted to know: Is the curriculum at FLCC and Geneva schools sufficient in producing qualified/hirable STEAM employees? As this is a very new project for Geneva, our research consists of surveying a variety of major STEAM employers in Ontario and Wayne counties. The data we collect will provide us with insight about hiring processes, what employers need in potential employees, whether candidates are coming prepared with the necessary skills and, if not, what skills are lacking.

With this information, our research team from Sociology 465: Senior Research Practicum will be able to make recommendations to help Geneva and FLCC students become more prepared for the STEAM workforce and have more financial opportunities.

SPENDING MATERNITY LEAVE WITH YOUR MOTHER: POST-NATAL CARE IN VIETNAM

Katherine Burns

Imagine living with your mother for three months while she takes over all of your cooking, cleaning, and child soothing duties. She also regulates what you eat, how you bathe, and what you wear. I found that this intensive nurturing is indeed the practice in Vietnam where mothers and mother-in-laws take full responsibility in caring for their daughters who have recently delivered a child. While abroad in Vietnam I interviewed women about their post-natal experiences. Why do are these practices typical in Vietnam but rare in the United States context?

While some of these practices are for restoring a new mother's strength, in many cases I found that this care goes beyond health benefits. These traditions often focus on beautification and rejuvenation. The inevitable spread of westernization explains the presence but not the context of these behaviors. A biocultural approach led me to focus on how these cultural findings relate to male investment in child rearing. The interviews I conducted explored the diversity of these practices and the shift across generations. My objective is to apply theoretical biocultural frameworks to help explain the cultural practices associated with maternal care in a Vietnamese population.

DISRUPTING THE SCHOOL-TO-PRISON PIPELINE

Christian Caban

This study, completed as part of an independent study in Education, examines the role of American educational and judicial systems in shaping racial stigmas of criminality.

This presentation will begin by exploring the research and scholarship on the relationship between schooling and mass incarceration, also known as the School-to-Prison-Pipeline. Next, the presentation considers factors contributing to the School-to-Prison-Pipeline, including zero-tolerance policies and hyper-policing of schools, compounded by underfunded schools. Following this, the presentation will highlight advocacy measures that disrupts the funneling of our children into the criminal justice system. I will frame this conversation around my personal experiences with carceral schooling culture.

MAKING THE ECUADORIAN IDENTITY VISIBLE IN THE HAMPTONS

Edisson Cabrera

A large percentage of immigrants from Ecuador have settled in East Hampton, New York since the late 1900's. While important historical events that Ecuador has gone through before and after colonization allowed Ecuador to develop into a mestizo (combination of indigenous and Spanish culture) nation, living in new American spaces has prevented Ecuadorians from constructing spaces to help them reconnect to their Ecuadorian identity. In these American spaces, they feel that they cannot freely express and continue to live in their Ecuadorian norm.

The ultimate goal of this project is to design a community center to give Ecuadorians in East Hampton a comfortable space to freely express their culture and educate Americans. The design would hybridize the Spanish, indigenous, and American culture, through different materials, texture, shapes, and forms of building that were developed during the pre-colonial and colonial era. I will use the surrounding environment of East Hampton to help develop the shape and form of the cultural center to show the new Ecuadorian culture that wants to be visible and integrated in the American culture.

THE EVOLUTION OF NATIVE FISHING RIGHTS IN THE PACIFIC NORTHWEST: PROTECTING CULTURE AND THE ENVIRONMENT.

Lily Cantral, Samm Corbett, Chad Tokowicz

The Columbia River is home to six salmonid species that provide nutrition to the earth and are important to the continuance of Native American cultures throughout the region. Due to development, hydroelectric dams, overfishing, and poor conservation practices, salmon runs have been in constant decline since the mid 1800s. While Native American rights to salmon harvest and fishing grounds were preserved through treaty rights these did not provide the legal teeth to assure they could actualize their harvest and were only pushed into law through litigation. Although the Belloni and Boldt decisions cemented treaty rights about catch limits into law, they neglected the importance of habitat conservation, which ultimately disenfranchised the natives from achieving a “moderate standard of living”¹ because the salmon runs have been destroyed or closed to migration.

By providing a historic account of treaty rights and an overview of the Boldt and Belloni decisions, this project traces the evolution of salmon law while uncovering the inadequacies of conservation practices framed by contemporary issues in the Columbia River Basin. Salmon conservation is intersectional as these fish are not only integral to the health and function of the Columbia River ecosystem but are the cultural backbone of many Native American communities. This issue highlights the intersectionality of environmental law, as we can see how environmental issues and social issues manifest themselves in tandem, elucidating the need for policies that consider both environmental and social outcomes.

¹ (384 F. Supp. 312 (U.S. Dist. 1974))

NAVIGATING THE COLLEGE SOCIAL CLIMATE BASED ON SOCIAL IDENTITIES

Sasha Carey

Undergraduates often cite campus social climates as one factor in the decision to transfer. My research team interviewed ten sophomores (including men and women, white and nonwhite, and straight and queer students), focusing on “significant moments” in their efforts to navigate college life during their first two years.

Students described being most vulnerable to transferring their first year, when either the campus climate and/or their peer networks were the main reasons they considered leaving. Although most of the interviewees said that the campus climate was a reason they considered leaving, the men were especially likely to mention problems with peer networks as a reason they considered leaving. By their sophomore year, most of the interviewees cited peer networks as the reason they decided to stay, illustrating the importance of friendships in the “pathway” to deciding not to transfer. However, there were differences by race and gender in the kinds of peer networks that made students stay. While both men and women referenced Greek life as a part of a negative campus climate, some of those same men joined a fraternity in their sophomore year in their effort to find more satisfactory peer networks.

*CARTEL LAND AND ITS MISREPRESENTATION
OF CITIZEN SELF-DEFENSE ORGANIZATIONS IN MICHOACAN, MEXICO*

Alejandra Castillo

Research suggests that the militant anti-narcotics campaign under President Felipe Calderon's administration in 2006 has directly influenced the increase of levels of drug-related violence in Mexico¹. On February 24, 2013, citizens of Mexico gathered to form self-defense organizations to respond to the rise in drug-related homicides, the lack of state military protection, and the formation of vigilante groups on the U.S. border. In this project I will present the phenomenon of the drug-related violence and criminal organizations in Michoacán, Mexico through an analysis of the 2015 highly acclaimed documentary *Cartel Land*.

Based on my analysis of the formal cinematic techniques and of the narrative, I conclude that the experiences of citizen organizations in the drug war are misrepresented when they are paralleled to those of U.S. vigilante groups. My interest in examining the documentary's interpretation of the citizen self-defense groups, or *autodefensas*, stems from a research paper that I completed for my senior seminar course, "Narcos: The War on Drugs," on the topic of the rise of drug-related violence in Mexico.

I will compile a set of specific scenes from the film to communicate that the filmmakers used footage and interrogations that romanticized the experiences of the *autodefensas* because of the filmmakers' interest in masculinity, guns and violence, especially that of the group founder, Jose Manuel Mirales. Most empirical research focuses on the variables that contributed to the development of U.S. foreign policies that attempted to combat the expansion of drug trafficking organizations (DTO's). Documentaries attempt to portray the violent confrontations between the Mexican state military and cartel leaders for media consumers, but fail to account for the individual history of the emergence of self-defense movements.

¹ Rios, Viridiana. "Why Did Mexico Become So Violent? A Self-Reinforcing Violent Equilibrium Cause by Competition and Enforcement". *Springer Science and Business Media, LLC*, 2013, pp. 139.

CONSTRUCTING PLAY IN PERFORMANCE

Teianna Chenkovich

Play is an indispensable part of human behavior. It is central to our childhood development and to the adaptability of the human species. Culture dictates how, when, and why people play, confining it to ritual settings and marginal spaces. In the ritual of American performance, practicing play is restricted to those performing and the audience adopts a passive role. My Honors Project in Dance and Anthropology explores the various definitions, functions, and cultural constraints that play is subjected to, with a focus on how play can be used as a compositional tool to engage an audience within performance.

Play is best understood by practicing playing. This interdisciplinary project used investigatory methods from both dance and anthropology to explore theoretical knowledge of play through movement improvisations. With the help of a rotating cast of six dancers, I sought to understand the paradoxes and ambiguities of play by testing conceptual ideas on moving bodies. As a movement researcher, I used embodied cultural knowledge to develop an understanding of play and how it could be used within performance.

The goal of the project is to create interactive and dynamic compositions that engage an audience in play. As part of the presentation in the Senior Symposium, I will be inviting participation in a movement game.

CONNECTING LABAN MOVEMENT ANALYSIS AND THE SOMATOSENSORY
CORTEX: NEUROMUSCULAR RE-PATTERNING FOR PHANTOM LIMB PAIN
SYNDROME

Eleanor Cherry

I will present a hypothesized theory about the relationship between phantom limb pain syndrome and neuromuscular memory. This work synthesizes the research of organismic-developmental theory, pain/tactile perception, mirror neuron theory, neural plasticity, kinesthetic empathy, and Laban Movement Analysis/Bartenieff Fundamentals to propose a new theory of treatment for phantom limb pain syndrome.

In application of the theory, in Laban Movement Analysis and Bartenieff Fundamentals exercises are implemented into the routine of a phantom limb pain syndrome patient in order to examine the effectiveness of utilizing motor pathways in therapeutic exercises for phantom pain and, in turn, the connection of neuromuscular memory and patterning to the somatosensory cortex. My findings will aid in the modeling of future movement-based therapies, working to decrease pain felt by patients with amputations by re-patterning their neuromuscular system to adapt to their new body.

HARMFUL ALGAL BLOOMS IN THE FINGER LAKES: NUTRIENT LOADING AND PROPOSED MITIGATION STRATEGIES

Shannon Collins, Lucas Heaslip, and Ben Robinson

Harmful Algal Blooms (HABs) in Seneca Lake have been increasing in prevalence in recent years. The blooms present a public health hazard, as they produce neurotoxins that can cause nausea, headaches, and, in extreme cases, death. The blooms could also be detrimental to the economies of towns that depend on the lake. The causes of HABs are complex and manifold, but nutrient loading stemming from land-applied manure on dairy farms is a primary driver. The ENV 400 Group Senior Interactive Experience (SIE) has examined the issue from multiple perspectives in a search for solutions.

Conesus Lake faces a similar problem but has had some success in combating HABs over the past few years. Although the lakes differ in a number of characteristics, Conesus Lake can be used as a model for successful HABs mitigation strategies in Seneca Lake. Using Geographic Information Systems (GIS), we identified priority areas based on physical characteristics, such as slope, proximity to waterways, and farm size, and propose a framework for improving the existing Seneca Lake HABs monitoring and mitigation strategies.

FROM THE REVIVAL TO THE MOB:
AGITATING FOR CHANGE IN THE AMERICAN WEST

Will Cost

Elijah Lovejoy was born in Albion, Maine. He moved to St Louis when he came of age, taking advantage of the expanding country's opportunities. After numerous encounters with a mob that pushed him into Alton, Illinois, and a local government and church that didn't support his views or his right to publish them, he was killed defending his press. Lovejoy's death cemented him as the first abolitionist martyr. The mob that killed him gave legitimacy to the abolitionist movement. But for many Americans in the 1830s, Lovejoy was an imprudent agitator who threatened the social order and was responsible for the fate that befell him.

The 1830 were a time of great political, social, economic and religious transformation. The West saw the convergence of several destabilizing factors: excitement around religious revivals, anxiety about the dynamism of a rapidly expanding economy, and the looming issue of slavery. Relying on primary sources, my research has sought to answer the question of why Lovejoy's words had the effect they did, and how one man could seem to pose such an existential threat to Southern social order.

TEACHERS IN GROCERY STORES NEAR YOU: TEACHER PROXIMITY AND PERCEPTION OF STUDENT ATTENDANCE

Rebecca Czajkowski

Elementary students can be shocked when they encounter an elementary school teacher in the produce aisle at the grocery store, surprised that the teacher had a life outside of the classroom. What if that was the norm? What if students' learning communities reflected the communities they lived in? With today's push for cradle to career readiness, one possible strategy for improving graduation rates across the board is to promote the values of community-based schooling in the American public school system.

This research project seeks to collect teacher perception of students who are chronically absent or tardy as well as demographic information, including data on how involved teachers are in the community they teach in. If teachers live and are engaged in the community they teach in, does it affect their perception of students? In this pilot study, surveys will be administered to ninth grade teachers at Geneva High School; ninth grade teachers were chosen for the pilot study because successful completion of ninth grade has been shown to be a strong indicator of whether or not a student will graduate from high school.

GRATEFUL IRONY:
THE MERGING OF 1960's COUNTERCULTURE AND BUSINESS

Robert M. Davis

Since the 1970's, many fans of the Grateful Dead have been a part of a cult following. How and why did the Grateful Dead keep fans coming back? One of the answers is the symbiotic economics carried on by the fans themselves. While the band allowed fans' economic agency, it was the fans' entrepreneurial expression of fandom that mattered: the band indirectly (and freely) marketed themselves to a wider range of Americans by granting agency to their fans to record their concerts and trade tapes, as well as allow fans to make their "tour money" by selling merchandise in stadium parking lots. This parking lot economy became just as important as the music itself. Since this band embodies American "peace and love" counterculture, the member's inherent goal is not to make money, yet the scene itself was a money maker both for the band and for the audience members.

Through analysis of primary source material, including fan and Grateful Dead-member memoirs and "fanzines" like *Unbroken Chain* and *Growing Up Dead*, I expect to illuminate the mechanisms of economic symbiosis that enabled fans to follow the dead for decades, in particular how fans became an economic driver for the Dead. This analysis will be informed by the business theories of Barry Barnes¹.

Understanding how the Dead's willingness to turn over agency to fans helped propel this American music group over five decades, extending the attitudes of the 1960's counterculture throughout time, is the fundamental goal of this project.

¹ Barnes, Barry. (2012) *Everything I Know About Business I Learned from the Grateful Dead*. Hahette Book Group: New York.

KNOCK KNOCK: THE LEGALITY AND CONSTITUTIONALITY OF EQUIPPING OUR DOMESTIC POLICE FORCE WITH MILITARY GEAR

Aidan Ely

Some believe militarization of law enforcement, while necessary to combat new threats to society, violates our Fourth Amendment rights through; warrantless home searches, stop-and-frisks and “no-knock raids.” I argue that these measures require ethical and legal reform. The legal, ethical and moral question of supplies and tactics that the Department of Defense (DoD) and legal system provide and authorize respectively to agencies responsible for policing our domestic streets must be addressed. Starting with the history of the first known military policing force in Rome, I compared and contrasted practice, tactics and legality of Rome, Britain and colonial America to the modern day United States, specifically from the Reagan to Obama Presidencies.

The concept “every man’s home is his castle” stems from Rome, but we see traces of this in Britain and colonial America, yet we see today in America these same violations of our homes and sanctity. My analysis suggests a correlation between DoD spending on the 1033 Program and higher numbers of fatal shootings. This presentation portrays the ever escalating attempts by the State to arm law enforcement.

“YOUNG, SCRAPPY & HUNGRY”: HOW MUSICAL REPRESENTATIONS OF THE FOUNDING FATHERS CHALLENGE THE THEORY OF ORIGINALISM

Aidan Ely

“What kind of men were the Founding Fathers?” According to the theory of Originalism, the U.S. Constitution should be interpreted as it was understood at the time of its writing. However, pieces of contemporary public history and new views of the Founding Fathers possess the potential to shift our understanding of the nation’s legal framework.

This project analyzes the popular Broadway musicals *1776* and *Hamilton*, which shifted the image of the Founding Fathers from enlightened proponents of democracy focused on combating tyranny to men burdened with questions of slavery, their own immigration, and their ties to Britain. Each work creates a tritone of emotional responses that advance new images of the Founding Fathers.

By synthesizing current research from the fields of cognitive science, public history, music studies and legal scholarship, I conceived a metaphorical conduit as a way of visually representing how new perceptions of the Founding Fathers can be derived from music. My theory captures the connection between auditory stimuli processed as emotions and the way it impacts our relevant memory, arguably changing our perspectives. Broadway hits 40 year apart, both *1776* and *Hamilton* offer views of the Founding Fathers that transform our understanding of the founding documents of the nation.

COLLABORATIVE ENGAGEMENT: CREATING A CURRICULUM

Amy Feda and Kevin Teel

Ward and Wendell's community centered service model identifies collaboration as "done with peers in the community, and from that service, new understanding and learning arises for all parties involved. Service learning is not done for someone who needs the help of a college student or professor" (Ward & Wolf-Wendel, 2000)¹. Ward and Wendel's model suggests that organizations create change in terms of the need, rather than just acting as "volunteers." We, the Master of Arts in Teaching (MAT) cohort of 2018, used this model as a basis for our projects, and our panel represents two separate but conceptually overlapping projects representing the meaning and importance of collaborative relationships in the community. Our projects included working with two different sites in Geneva and involve leadership training, grant writing, and curriculum development.

This semester, a course is being offered at Geneva High School titled Poetic Justice for All. In its current form, the course is being offered as a one-semester, half-credit English class focused on examining different themes in the genres of hip-hop and spoken word. What makes the course unique is the fact that it is student led and the content is driven by student interest. The goal of our team is to take this pilot program and develop it into a full-year, full-credit English class. We worked in collaboration with the current students to determine what aspects of the course are effective and valuable, in order to develop it further. Potential aspects of the future course include continuing the student-leadership role and appropriate HWS student collaboration, as well as the potential to bring in guest speakers, attend talks and workshops outside of school, and practice critical literacy skills.

¹ Ward, K., & Wolf-Wendel, L. (2000, February). Community-Centered Service Learning: Moving from doing for to doing with. *American Behavioral Scientist*, 43(5), 767-780.

COLLABORATIVE SERVICE LEARNING IN THE GENEVA CITY SCHOOL DISTRICT: INVESTING IN CHANGE

Allison Flaherty and Julianna Hartnett

How can students feeling displaced in their regular, required English courses become learning collaborators? We, the Master of Arts in Teaching (MAT) cohort of 2018, draw on Ward and Wendell's community centered service model to frame our inquiry. Ward and Wendell identify collaboration as "done with peers in the community, and from that service, new understanding and learning arises for all parties involved. Service learning is not done for someone who needs the help of a college student or professor" (Ward & Wolf-Wendel, 2000). Ward and Wendel's model suggests that organizations create change in terms of the need, rather than just acting as "volunteers." This panel represents two separate, but conceptually overlapping, projects representing the meaning and importance of collaborative relationships in the community. Our projects included working with two different sites in Geneva and involve leadership training, grant writing, and curriculum development.

Our portion of this project is to develop a grant proposal for the Wyckoff Family Foundation. The goal is to extend the current half-credit Poetic Justice class into a full-credit English course. The funding being sought would provide the course teachers with the ability to bring in guest speakers, hold workshops, participate in field trips, facilitate college preparation, and assist student-designed projects. Ultimately, this course could help students who are currently feeling displaced in their regular, required English classes to become interested in developing their writing and literacy skills.

REDUCING UPFRONT COSTS OF ENERGY EFFICIENCY AND INSTALLATION THROUGH SECURITIZATION

Brett Friedberg

Since the early 2000's, technological innovations have led to growth in energy efficiencies and increased use of renewable power (Lazard, 2017). However, various barriers to entry, including high upfront costs, have limited diffusion of these new technologies.

I propose developed an environmental and economic based model that moves away from the need for government intervention by securitizing the upfront costs associated with increasing energy efficiency using an Asset Backed Security (ABS). These debt instruments should provide lower costs for improving energy efficiency, while repaying investors with a guaranteed cash stream. This also provides investors with a moral incentive, as their investment would reduce CO₂ emissions by decreasing energy demand. Yet, this securitization structure would not only allow large firms to reduce their energy burden, but would incentive smaller firms and residents to improve energy efficiency.

THE NOVO MODEL: A NEW WAY TO COMMODOITIZE CO₂ TO REDUCE EMISSIONS

Brett Friedberg

For the last 150+ years, the global economy has had an ambivalent affection for fossil fuels. This affection helped expand global gross domestic product from \$1.2 trillion in 1820, to \$108.12 trillion (2011 dollars) in 2015 (Roser, 2017). However, failure to recognize all the impacts, good and bad, associated with this growth has led to an oversupply of CO₂ emissions, which in turn is leading to climate change.

To solve this problem, I have developed, as part of a long-term independent study with Professor Tom Drennen, a proposal called the Novo Model. This multi-dimensional model, which uses derivative instrument markets, non-compliance risk for caps, coupon payments, and securitization, seeks to reduce CO₂ emissions without hindering long-term economic growth by combining the most efficient functions of the carbon tax and cap-and-trade program, which provide stability for emitters and transparency for the public. This combination provides flexibility through adjustable pricing and caps, incentivizing the market to increase and diffuse clean and renewable technology.

DESIGNING FOR SOCIETAL SCOTOPHOBIA

Morgan Gaudet

For millions of years the only nocturnal lighting our world ever knew was the glow of the moon and stars, and bioluminescence. Artificial night lighting arrived with the dawn of civilization, when early ancestral humans mastered the tool of fire. Primitive humans were vulnerable to attack by larger nocturnal predators because their scotopic vision, or night vision, was not as evolved as the dangerous animals that stalked them come nightfall. Learning to use fire as a visual tool drastically increased their nightly safety; however, their natural fears of what lurked in the shadows never faded.

Today, dread of the dark, a fear known as scotophobia, is evident in the perpetual installation of artificial lighting erected solely for the benefit of society's safety when interacting in nocturnal landscapes. Excessive lumination hinders flora and fauna by decreasing pollination, migration, and reproduction rates, and ironically decreases human safety by increasing crime rates and health problems associated with sleep deprivation.

As researchers continue to discover the negative externalities associated with excessive outdoor night lighting, I aim to redesign nocturnal lighting systems through a personalized lighting experience that is less invasive to the surrounding environment. I reconceptualized lighting systems by designing personalized wearable lighting to keep pedestrians feeling safe while also decreasing the need for excessive public luminaires that create problematic light pollution. A personalized lighting system will also increase safety from crime, flashing when someone is in danger, alerting people visually that someone needs assistance.

WOMEN IN POWER: IMPACTS OF WOMEN LEADERS ON A LOCAL, NATIONAL AND GLOBAL SCALE

Taylor Gorycki

As a soon-to-be college graduate, I find myself constantly weighted down by an extensive list of daunting questions about what lies ahead of me after graduation. After spending hours skimming through LinkedIn and other career searching websites, I've found that most of the dream leadership positions I desire are currently held by men. Why? What can be done to help change this reality and empower more women leaders?

The goal for my project was three-fold. First, I wanted to understand the historical reasonings behind the uneven percentage of men holding official leadership positions over women. Secondly, I desired to speak with women leaders, entrepreneurs and business owners from around the globe, and study the impacts their leadership has had on those around them. And thirdly, I wanted to compile all I had learned into my own "leadership manifesto" which would discuss my experiences and lay down a road map for my future as a global woman leader.

Thanks to the Cohen Fellowship awarded to me through HWS's Centennial Center for Leadership, I've been able to satisfy these goals:

- I took a class through Case Western Reserve University which educated me on issues related to gender biases, pay discrimination, and the lack of leadership opportunities traditionally available to women.
- I met with, interviewed, and shadowed 35 women leaders from across a diverse array of industries as a way of documenting their individuals journeys, broadening my personal and professional networks, and solidifying my dreams and the steps I need to take to become a successful leader.
- I spent a month living in Tamale, Ghana working for a nonprofit organization called Saha Global, where I helped female entrepreneurs from rural villages build and establish their own clean water businesses.

THE TAJ MAHAL OF GENEVA, NEW YORK:
ECONOMIC AND FINANCIAL STABILITY OF THE GENEVA COMMUNITY
CENTER

Gemyra Greggs, Melissa Moore, Niame Traore, and Divine Wing

The Geneva Community Center (GCC) is a “palace” that prides itself on youth development and community engagement, but is in trouble due to its lack of money. Financially strained communities cannot invest in social programming and organizations that facilitate youth development solely through public funding: businesses and other similar community partners must collaborate to ensure that spaces like GCC exist because of its impact on the community.

Working with the Executive Director of the Boys and Girls Club of Geneva, Chris Lavin, we will seek to understand the role of GCC, what activities people would like to have, and how members of the community would take advantage of the large facility. Our group also will be conducting phone interviews with other community centers in cities comparable to Geneva to assess financial models that could be implemented here. Additionally, we will survey various organizations in Geneva to gauge their mission and needs.

We hope to find ways that the GCC could better serve the community. We will be looking at organizations and/or businesses in the Geneva community that have a need that the GCC could satisfy, along with some of the strategies and ideas used to maintain financial stability at other community centers similar to the GCC.

TEXT PAINTING WITH TIME SIGNATURES IN THE DISMEMBERMENT PLAN'S WORK

Peter Hammel

The Dismemberment Plan, an indie-rock band conceived in the mid-nineties in Washington, D.C., has two critically successful albums that employ unequal and asymmetrical time signatures. Both 1999's *Emergency & I* and 2001's *Change* include a handful of songs that use time signatures outside the realm of normal, four beats per measure, backbeat rock music. The time signatures contributed to the text painting of each song: In music, lyrics can paint a mental picture for the listener, but text painting is achieved by using musical aspects to reflect the same meaning as the song's lyrics. Instead of seeing the pictures painted by the singer's lyrics or hearing the chords provided by the instrumentation, listeners can feel time signature's physical implications as they tap their feet to the work.

Utterances of these complex time signatures at work include "Time Bomb," a piece that interrupts the four beat time signature with a measure of six beats, creating a metaphorical and unanticipated "time bomb" for the listener. Another example, "The Jitters," has two different rhythmic grooves, both with unequal beats in the measure, that give literal jitters, a nervous anticipation of where the downbeat sits.

These instances of complex time signatures reinforce the lyrics and achieve impressive text paintings. Chords and rhythms within measure are obvious tools for text painting, but The Dismemberment Plan's consistent and successful usage of complex time signatures to enhance their work and the listeners' experience is unique. This pattern from The Dismemberment Plan exhibits a new powerful tool for musicians eager to accomplish text painting.

SILENCING GENES: USING RNA INTERFERENCE TO CHANGE BEHAVIOR

Theresa L. Harvey

After taking neurobiology with Professor Ryan and learning about a model organism called *Caenorhabditis elegans*, I wanted to explore the effects of silencing specific genes in this organism by using a laboratory technique called RNA interference. *C. elegans* are transparent nematodes (roundworms) whose simple nervous system, small size, and rapid reproduction makes them an ideal model organism.¹ In this independent study, I examined the behavioral effects of silencing two genes called *unc-22* and *rol-6* that are normally expressed in *C. elegans*. RNA interference (RNAi) is a biological process that occurs in cells when double-stranded RNA molecules inhibit gene expression by neutralizing targeted mRNA molecules.² In this case, RNA interference induced “knockdown” of gene expression for two genes that are necessary for proper locomotion.

Normally, *C. elegans* move in a sinusoidal wave³; however, when the genes such as *unc-22* or *rol-6* are mutated, the worms’ movement deviates from the norm. *C. elegans* with a mutated *unc-22* gene exhibit a twitch-like behavior, in which the worms’ heads move back and forth quickly.⁴ *C. elegans* with a mutated *rol-6* gene exhibit a right roller phenotype, where the worms are twisted into a right-handed helix.⁵ I found that the progeny of *C. elegans* fed *unc-22* RNA interference bacteria exhibited the same twitching behavior characteristic of mutant *unc-22* worms. These results indicate that *unc-22* gene was successfully knocked out or silenced in these worms. General applications of the RNAi technique include the potential for it to be used as an inducible “gene therapy” to suppress disease phenotypes.

¹ *C. elegans* Sequencing Consortium, The. (1998). Genome sequence of the nematode *C. elegans*: a platform for investigating biology". *Science* 282: 2012–2018.

² Hodgkin, J. (2001). RNA Interference. *Encyclopedia of Genetics* 1743–1744.

³ Riddle DL, Blumenthal T, Meyer BJ, et al., editors. (1997). *C. elegans* II. 2nd edition. Cold Spring Harbor (NY): Cold Spring Harbor Laboratory Press.

⁴ Hwang, H.; Barnes, D. E.; Matsunaga, Y.; Benian, G. M. Ono, S.; Lu, H. (2016). Muscle contraction phenotypic analysis enabled by optogenetics reveals functional relationships of sarcomere components in *Caenorhabditis elegans*. *Scientific Reports* 6:19900.

⁵ Hart, Anne C., ed. Behavior (July 3, 2006), *WormBook*, ed. The *C. elegans* Research Community, WormBook, doi/10.1895/wormbook.1.87.1, <http://www.wormbook.org>.

ABNORMAL CIRCADIAN RHYTHM IN BIPOLAR PATIENTS AS A POTENTIAL FOCUS OF TREATMENT

Theresa L. Harvey

Bipolar disorder, also known as manic-depressive illness, is characterized by unusual changes in mood, energy and activity level that can affect day-to-day function.¹ Roughly 3 million people in the United States suffer from bipolar disorder.¹ Recently, abnormal circadian rhythm has been discovered as a critical pathophysiological component in bipolar disorder.² Circadian rhythm is the internal 24-hour clock that synchronizes with environmental cues of light and darkness to signal sleeping and waking intervals in plants, animals, fungi and cyanobacteria.³ People who are in the manic state of bipolar disorder tend to have shorter than average circadian rhythms, which means their biological clock is programmed to be less than 24-hours, whereas people who are in the depressive state of bipolar disorder tend to have longer than usual circadian rhythms, which indicates that their biological clock is longer than 24-hours.⁴

For my biochemistry senior seminar class, I am reviewing literature on disgruntled circadian rhythm in bipolar disorder patients, and specifically exploring the dysregulation of GSK-3 β , a protein that adds a phosphate group to other proteins. Lithium, a selective GSK-3 β inhibitor, has been shown to prolong the circadian rhythm⁵, which is useful in treating patients in the manic state; however, this drug would be ineffective in treating prolonged circadian rhythm characteristic of the depressive state. Other selective GSK-3 β inhibitors, such as CHIR99021, have been shown to shorten the circadian rhythm⁶; therefore, this type of drug could potentially treat the prolonged circadian rhythm characteristic of the depressive state. In this presentation, I want to explore molecular effects of CHIR99021 on the circadian rhythm biochemical pathway and how this drug potentially causes the shortening of the circadian period.

¹ The National Institute of Mental Health. (2016, April). Bipolar Disorder.

<https://www.nimh.nih.gov/health/topics/bipolar-disorder/index.shtml>.

² Harvey, A. G. (2008). Sleep and Circadian Rhythms in Bipolar Disorder: Seeking Synchrony, Harmony, and Regulation. *American Journal of Psychiatry* 165, 820-829.

³ Buhr, E. D.; Takahashi, J. S. (2013). Molecular components of the mammalian circadian clock. *Handb Exp Pharmacol.* 217, 3-27.

⁴ Lee, H-J.; Son, G-H.; Geum, D. (2013) Circadian Rhythm Hypotheses of Mixed Features, Antidepressant Treatment Resistance, and Manic Switching in Bipolar Disorder. *Korean Neuropsychiatric Association* 10, 225-232.

⁵ Kaladchibachi, S. A.; Doble, B.; Anthopoulos, N. Woodgett, J. R.; Manoukian, A. S. (2007). Glycogen synthase kinase 3, circadian rhythms, and bipolar disorder: a molecular link in the therapeutic action of lithium. *Journal of Circadian Rhythms* 5:3.

⁶ Hirota, T.; Lewis, W.G.; Liu, A.C.; Lee, J.W.; Schultz, P.G.; Kay, S.A. (2008) A chemical biology approach reveals period shortening of the mammalian circadian clock by specific inhibition of GSK-3 β . *Proc Natl Acad Sci USA.* 105, 20746-20751.

CREATIVE MOVEMENT IN MIDDLE SCHOOL AND HIGH SCHOOL CLASSROOMS

Leah Jacobs

The power dynamic that exists between teachers and students causes students to feel fear and judgment, which can deny students the possibility to reach their full potential as independent thinkers.¹ Establishing creative movement throughout the classroom assists in eliminating the construct of power and allows the teacher to honor and accredit students' creativity, ultimately preparing students to lead a life of autonomy, creativity, and intrinsic motivation.

Through an emphasis on the student as the creator, my project explores the different ways movement can be taught and integrated into a classroom setting. I explored multiple methods in response to the questions "What are the ways in which the teacher fosters a movement environment that encourages students to want to create?" "What are ways in which student-centered creative movement can be activated through a traditional classroom setting?" and "Why integrate creative movement into the curriculum?"

As an Arts and Education major with a minor in Dance and Child Advocacy, I had the opportunity to teach dance to students ages 12-15 at the Hillside Children's Center, where I gained experiences that I analyzed through frameworks from a previous Dance Education course. This hands-on experience, documented in my teaching booklet "Teaching Dance: Lessons Guides to Teaching Choreography and Creative Movement," will help me discuss these creative movement/dance experiences and analyze how factors from successful, creativity-centered lessons can be implemented into the classroom.

¹ Palmer, Parker J. (1998). "A Culture of Fear: Education and the Disconnected Life." *The Courage to Teach: Exploring the Inner Landscape of a Teacher's Life*. San Francisco, CA: Jossey-Bass.

PLEN: WOMEN AT THE TABLE

Abigail Janik and Jessica Lathrop

The Public Leadership Education Network (PLEN) is a national organization with the focus of increasing the number of women in top leadership positions in the policy sector. PLEN holds seminars in Washington, D.C., introducing women to career paths, role models, and skills trainings before they enter the workforce. Over the past five years, William Smith students have worked together to create an active on-campus PLEN Chapter which provides the opportunity to engage in mentorship, community, and leadership for female-identified students.

At the college level, our PLEN Chapter promotes an inclusive environment for all William Smith students and creates a space where these students can discuss a wide range of issues related to women's leadership. We aim to help and encourage female students to build a network with one another as well as in their greater community. To maintain and enrich our network, we invite alumnae, faculty, staff, student, and guest speakers to our breakfasts to share stories of their triumphs, obstacles conquered, and lessons learned. These stories are often inspiring for younger students and provide a wonderful way to connect with other William Smith students through shared experiences. We are looking forward to expanding PLEN at William Smith with the first ever PLEN theme house next year.

A “TRIPLE-WIN” FOR FINANCIAL AID STUDENTS:
A PILOT PROGRAM FOR COMMUNITY WORK STUDY AT HWS

Yujun Jiang, Megan Shenton, Katherine Storch, and Jennifer Sullivan,

In the context of rising minimum wage and unchanging Federal Work Study budget, our project aims to increase work opportunities for students eligible for financial aid and equip them with professional learning opportunities. Our objective is to bridge student workers, local organizations and HWS to create a “triple-win” outcome. Working with Katie Flowers at CCESL and Brandi Ferrari at Salisbury Center, our research team from Professor Harris’s Sociology Senior Seminar is collecting data and conducting an analysis that would be used to support a community work study pilot program, connecting student workers with local non-profit community organizations.

The data for this study will be collected by administering two surveys, one sent to current HWS students eligible for federal work study, the other to directors or administrators of local non-profit organization in the Geneva community. We expect to analyze students’ experiences with existing federal work study programs and identify reasons why some eligible students have not participated in current FWS program. We will also identify main desirable skills and their willingness to participate in a new community work study program. In addition, we will match skills demanded by students and skilled offered at community partners, to determine community organizations suitable for the pilot program.

Through our study, we hope to collect data that would support an expansion of the current Federal Work Study Program at HWS and identify the needs of students and community partners. The data will then be used by CCESL and the Financial Aid Offices to implement a Community Work Study Program.

ADVOCATING FOR PEACE IN YEMEN INSIDE AND OUTSIDE THE CLASSROOM

Amelia Johnson

Over the past three years, Yemen has been devastated by a civil war. More than 17,000 people have died, and 22.2 million are in need of humanitarian assistance. I first researched the crisis in an academic exercise, and now continue my research as a Policy and Advocacy Intern at The Yemen Peace Project.

Last semester, in my Political Science capstone seminar, “Yemen and the Politics of Disintegration,” I led a research team in creating a policy report based on the question: How can peace be created and maintained in Yemen? We learned about the drivers and dynamics of the war by reading policy reports, news articles, and books. This research directed our attention to accountable governance as a primary instigator of war, believing the development of accountable institutions might help legitimize the war-torn state. We then crafted related policy proposals. As a group and with our class, we analyzed the benefits and drawbacks of every proposal and revised accordingly. In the end, the report distinguished between local structures of accountable governance, such as participatory budgeting, and national structures of accountable governance, such as a mixed electoral system.

I have further explored my interest in accountable governance at The Yemen Peace Project. I am working to identify ways the international community can promote the role of women and youth-led civil society organizations in Yemen’s peace and reconstruction process. I have used elements of my seminar research, and will be conducting interviews with Yemeni activists for this project to advance my understanding of civil society in Yemen, and help me accurately represent the needs and interests of Yemenis in my policy proposals.

A TREATMENT REVIEW FOR CHILDREN WITH SOCIAL ANXIETY AND AUTISM

Lily Kane

There is a common comorbidity between children and adolescents with Social Anxiety Disorder (SA) and Autism Spectrum Disorder (ASD). ASD is associated with several symptoms that affect functioning, such as difficulties in social interactions, verbal and nonverbal communication, and repetitive behaviors. The Centers for Disease Control and Prevention (CDC) estimates autism's prevalence as 1 in 68 children in the United States. Children with Social Anxiety are characterized with intense self-consciousness and fears of embarrassment that go beyond common shyness, leading to avoidance of social interactions. Children with SA and ASD tend to have anxiety in social situations and would benefit from a treatment reducing these symptoms.

The study of children and adolescents with SA and ASD has been limited to research focusing on the treatment of anxiety through the use of Cognitive Behavioral Therapy (CBT). Though CBT is a commonly used treatment for children with SA and ASD, research has found reduced CBT treatment outcomes for patients with ASD.

A new and promising treatment, Attention Bias Modification Treatment (ABMT), a computer-based program that uses attention training to reduce anxiety symptoms based on the idea that reducing attention bias is related to decreased anxiety symptoms. Currently, there is no previous research on the use of ABMT for children and adolescents with comorbid SA and ASD. The hope is that in the future, ABMT will be used as an effective option for treating children with SA and ASD.

SAME SAME BUT DIFFERENT: INVESTIGATING AUTHENTICITY
CLAIMS OF VIETNAMESE CUISINE IN CLEVELAND, OHIO

Sarah Kloos

Authenticity is a socially constructed label. Placing the word “authentic” on specific experiences results in preconceived notions and consequential statements of value. This project aims to investigate beliefs, theories and opinions regarding authenticity of Vietnamese cuisine through research into the Vietnamese-American community/ies in Cleveland, Ohio. I am approaching this project in a multi-method, ethnographic format that involves observation, interviews and self reflection on experiences. I aim to explore individual claims given by chefs for labeling their food as “authentic” or not. Why is it authentic to them? Do they even claim their food as authentic? And authentic to what: history, tradition, common food culture or even taste preference?

The word “authentic” remains a useful framework to investigate both the positive and negative consequences of adventure seeking. By examining the consequences of neo-colonialism in the form of a search for the new and exotic, my project unveils the slipperiness of authenticity.

HOW DO YOU LIKE THEM APPLES? A COMPARATIVE ANALYSIS OF NICOTINE CONTENT IN POPULAR FLAVORED SHISHA PRODUCTS

Emily Knipper

While several studies quantify the harmful substances found in "popular" flavors of hookah tobacco, there has not been a standard for understanding which products are most popular. I aimed to: 1) determine the most popular brands and flavors of hookah tobacco products, as reported by adults in a) the Population Assessment of Tobacco and Health (PATH) Study, which is a large U.S. based longitudinal study with nearly 46,000 participants aged twelve and older, b) local hookah retailers in Buffalo, NY, and c) online hookah forums; and 2) determine the nicotine content of these products.

Wave 2 public-use PATH data were analyzed using Stata v. 14. Popular brands and flavors were defined as those listed with the greatest frequency amongst PATH participants when asked their last or usual hookah tobacco product used. Suggestions of popular products from local retailers and online forums were also analyzed. Identified flavors were then purchased in different brands, and determination of nicotine content was performed using Gas-Chromatography Mass Spectrometry (GC/MS) on 22 different products. Nicotine concentration was measured prior to smoking for all products and before and after smoking for products suggested by online hookah forums.

The most popular hookah tobacco brands according to adult PATH participants were Starbuzz and Fantasia, while the most popular flavors were all fruit flavors, according to PATH and local retailers. Brands and flavors suggested by online hookah forums varied but included products such as Al Fakher Mint and Nakhla Two Apples. The mean nicotine content was 2.2mg nicotine/g product, and the lowest nicotine concentration prior to smoking was 1.5mg nicotine/g product.

Typically, warning labels on shisha products indicate a nicotine concentration of 0.05% (0.5mg nicotine/g); for all products tested, mean nicotine levels prior to smoking were higher than the label suggested. Future studies may wish to continue investigating the change in nicotine concentration that occurs in hookah tobacco before and after a smoking session, in order to better understand changes in nicotine content.

STRETCHING YOURSELF THICK

Pete Lambos

My presentation will catalogue my experience across my entire senior year as a full-time HWS student and a professional writer for a sports media corporation. My current writing job arose from a summer internship that lasted three months, at which point the company offered me a job. I have written for the company every weekday since the beginning of the fall semester, and this semester, I conducted an Independent study that catalogues my experiences as a professional student writer. My goal is to show fellow students that they can be a full-time student, can still be engaged socially and academically, while doing something they love every day.

One year, over a thousand articles, and tens of millions of reads later, I have discovered how to dictate my own schedule in a manner that allows me to stretch the limits of my work ethic and dedication to my craft. Using a series of personal journals submitted on a weekly basis that catalogued the key moments and reflective practitioner approach to being a student and a professional, I hope to take my experience as a Senior and provide a framework for how future students can be the best version of themselves while managing a healthy balance of work, academics, and enjoyment.

READING YOUR WAY TO EMPATHY

Jessica Lathrop

The ability to be empathic and to understand and experience the emotions of others depends on one's own breadth of emotional experiences. Readers of fiction can be transported into stories as they identify with main characters¹: as characters experience emotions, so too can readers, broadening their emotional experiences and potentially increasing their capacity to empathize with others in their daily lives. Prosocial behavior, any action intended to help others, is a more tangible outcome associated with empathy. Many factors are known to contribute to empathy and prosocial behavior, including parent-child relationship, personality, and emotion regulation skills.

I used the responses of one hundred college students to assess whether reading variables (frequency and enjoyment of reading, reading exposure, and reading comprehension abilities) were associated with higher empathy and prosocial behavior scores. I also measured the influence of the known predictors of empathy and prosocial behavior to determine whether the reading variables uniquely predicted the outcomes (above and beyond the known predictors). I expect that the reading variables will predict increased empathy and prosocial behavior.

¹Johnson, D.R. (2011). Transportation into a story increases empathy, prosocial behavior, and perceptual bias toward fearful expressions. *Personality and Individual Differences*, 52, 150-155.

MINDFULNESS IN COLLEGE STUDENTS' LIVES

Mengqi Liu

College students experience various social and academic stressors that place them at risk for psychological problems, including depression and anxiety. This research project explored whether classroom-based mindfulness practices could help students to cope with these stressors more effectively.

During the spring of 2017, I studied the relationship between classroom-based mindfulness practices and students' levels of mindfulness, as well as various aspects of their psychological well-being, including self-compassion, perceived stress, and anxiety. This research project compared two groups of students, one group recruited from two sections of PSY 370 (Topics in Developmental Psychology), and the other group recruited from other 300-level psychology classes. In PSY 370, mindfulness theories and practices were incorporated both in and outside of the class. Both groups were asked to complete a packet of surveys at the beginning, middle and the end of the semester. The results showed that students who were in PSY 370 had a deeper understanding of mindfulness at the end of the semester and they reported that the mindfulness practices helped them to manage their stress.

This research suggests that class-based mindfulness strategies are potentially beneficial to help college students to cope with stress. Limitations and future directions for this research will also be discussed.

BUSINESSMEN AMBASSADORS: WEST AFRICAN ENTREPRENEURS IN GUANGZHOU, CHINA

Harrison Luce

My project explored the newly established trade and immigration patterns between China and Africa. Specifically, I focused on the city of Guangzhou, China which is home to thousands of economic immigrants from Africa. I developed an interest in this specific subject through my coursework in African Studies, International Relations and French and Francophone Studies. The time I spent studying in Senegal was particularly impactful, and my academic interests for my post-graduate studies are closely related to this topic.

Trade between China and Africa has increased exponentially since the early 2000s, which has coincided with an increase in the movement of peoples between the two regions. I wanted to explore the impact that the African diaspora can have within China, rather than the more well-known phenomenon of Chinese engagement within Africa. I focused specifically on two main questions: "What incentives do Africans have to immigrate to China?" and "What barriers do these immigrants face integrating into Chinese society? In interviewing individuals in Guangzhou, I concluded that China (Guangzhou specifically) provides economic opportunity for African immigrants; however, this "better" business opportunity is met with resistance from regional and national Chinese policy that restricts immigration and business licensing. African businessmen and women are amongst the most successful in the Guangdong province, yet are subjected to the harshest policies.

YOGA AND MINDFULNESS IN THE ELEMENTARY CLASSROOM CURRICULUM

Sophie MacCracken

My research project explores the question: “How may yoga and mindfulness effect student’s behavior in an elementary school class when implemented into the curriculum?” My interest in this subject has stemmed from my experience with working with students in elementary schools as part of the Teacher Education Program, personal experience with yoga. The lack of physical activity most children in the US are receiving in elementary schools is another motivating factor.¹

I discovered that most research on the effects of yoga and mindfulness has been geared towards adults and those with disabilities or medical conditions, and suggests that participants experience increases in wellbeing, health, and reductions in anxiety.² I am extending research in the field of yoga/mindfulness to children. As a form of exercise for both the mind and body, the benefits of yoga are just beginning to appear as students learn to self regulate, calm their minds, and energize their bodies in order to learn better.

I created a unit plan with four yoga and mindfulness lessons for a first grade inclusive classroom at West Street Elementary School. I observed the class before and after I taught the lessons and interviewed the head teacher in order to see the influence on student’s behavior. My materials are being used to demonstrate associations with yoga and mindfulness and the positive physical and emotional benefits on students. As a readily available resource for students and teachers, yoga has the potential to be used as educational and physical activity tools.

¹ Beauchamp, M. R., Rhodes, R. E., & Nigg, C. R. (2016). Physical activity for children in elementary schools: time for a rethink? *Translational Behavioral Medicine*,7(1), 64-68.

² Greenberg, M. T., & Harris, A. R. (2011). Nurturing Mindfulness in Children and Youth: Current State of Research. *Child Development Perspectives*,6(2), 161-166.

EVERYTHING IS AWESOME: FAILURE IN PURSUIT OF ANTI-CANCEROUS ANALOG SYNTHESSES AS TOLD THROUGH A LEGO ANALOGY

Sophie Melvin

Topics in synthetic organic chemistry—like a Michael addition of substituted indoles to 3-pyrrole-2-ones and furan-2-ones—often seem to be beyond a layman's understanding. Using a case study from my Honors project in Chemistry, I hope to challenge this assumption: complex processes can be as easy as working with LEGO blocks.

My honors project focuses on the development of synthetic pathways towards the formation of unfused and fused 3,4-diaryl substituted furan-2-ones that resemble the anti-cancerous staurosporinone through their structural scaffolding. This case study specifically looks at the optimization of one of these steps using a novel Lewis-acid mediated indolylolation reaction to form simple monosubstituted 3-indolyl-furan-2-ones from tetrionic acid.

In this talk I seek to highlight not only the struggles of the research process in general, but how researchers can find success in failures such as unexpected and unanticipated findings (a hallmark of scientific discovery), and effective communication of science to the public.

PREDICTING ACADEMIC ACHIEVEMENT ACROSS THE MIDDLE SCHOOL TRANSITION

Maureen Milmoe

The transition from elementary to middle school is an important developmental milestone in the lives of young adolescents: not only do adolescents have to adjust from self-contained classrooms and close relationships with teachers to a larger, more impersonal environment, they also have to adapt to new ways of thinking and behaving in middle school. As such, young adolescents' unfamiliar school environment and changing social context are often inconsistent with their developmental characteristics (Kingery et al., 2011)¹.

Based on incongruences between adolescents' developmental needs and their middle school environment, certain pre-transition factors may predispose certain students to adjustment difficulties across the transition. Some students experience declines in academic achievement, self-esteem, and interest in school, as well increases in psychological distress.

The aim of my study was to investigate the relative importance of academic self-concept, school involvement, and school attendance in predicting students' post-transition academic achievement. Findings suggest a specific focus on academic self-concept in elementary school could ultimately lead to greater academic achievement and a more successful middle school transition for young adolescents.

¹ Kingery, J. N., Erdley, C. A., & Marshall, K. C. (2011). Peer acceptance and friendship as predictors of early adolescents' adjustment across the middle school transition. *Merrill Palmer Quarterly*, 57, 215-243.

“TO PIMP A BUTTERFLY” AND *THE WEARY BLUES*:
ART, RACE, AND CLASS

Maximilian Mitschke

Art produced during the Harlem Renaissance in the 1920s shows parallels to the art produced in the Black Lives Matter movement today, which inspired me to ask two questions: “What comparisons can be made between the artistic movements of the Harlem Renaissance and the Black Lives Matter movement?” and “How did these times of social unrest shape and draw inspiration from art?”

In order to answer these questions, I will analyze literary texts produced by Langston Hughes during the Harlem Renaissance, *The Weary Blues* and his “The Negro Artist and the Racial Mountain.” I will then analyze the content of lyrics by Kendrick Lamar from his sophomore studio album “To Pimp A Butterfly,” compare those to Hughes’ literature, and investigate Lamar’s connection to the Black Lives Matter movement.

My interest in this topic arose when participating in a class at Leipzig University concentrating on African American literature. During discussions about the Harlem Renaissance and Langston Hughes, I started recognizing topical parallels to the music of Kendrick Lamar and realized that both allowed a reading along class boundaries. Because race and class intersect, I also aim to employ a class reading of Lamar’s texts, investigate why his lyrics resonate beyond the African American community, and investigate the ways in which they were adopted in a modern movement that fights for a variety of causes, such as the fight against police brutality, the empowerment of women, and the overall abandonment of social injustice.

YOUTH LEADERSHIP COLLEGE COLLABORATIVE EVALUATION: AN ACCESS QUESTION

Jessica Shae Nelson

Ward and Wendell's community centered service model identifies collaboration as "done with peers in the community, and from that service, new understanding and learning arises for all parties involved. Service learning is not done for someone who needs the help of a college student or professor" (Ward & Wolf-Wendel, 2000). Ward and Wendel's model suggests that organizations create change in terms of the need, rather than just acting as "volunteers." We, the Master of Arts in Teaching (MAT) cohort of 2018, used this model as a basis for our projects. This panel represents two separate, but conceptually overlapping, projects representing the meaning and importance of collaborative relationships in the community. Our projects included working with two different sites in Geneva and involve leadership training, grant writing, and curriculum development.

Elementary students are in need of opportunities to learn about leadership skills and how to cultivate these skills in their own lives. The Youth Leadership College (YLC), facilitated by the Hobart and William Smith Center for Centennial Leadership, coordinates with West Street School in Geneva, NY to educate students of these skills through various activities and lectures. The YLC consisted of three major themes: leading self, leading others, and leadership in action.

I conducted an evaluation on the YLC to assess the efficacy of this program. I explored various examples of program evaluation criteria and formatting to organize my project. Questions were proposed to the administrators at West Street, the student participants, and the YLC creator, Caroline Dosky MAT '13 regarding their perceptions of the program. Upon my inquiry, I have created recommendations for the program to utilize for its continuation in the future.

Ward, K., & Wolf-Wendel, L. (2000, February). Community-Centered Service Learning: Moving from doing for to doing with. *American Behavioral Scientist*, 43(5), 767-780.

TRENDS OF EXTREME WIND CHILL TEMPERATURES ACROSS CANADA AND THE UNITED STATES

Haley Okun

Previous research projects have focused largely on increasing air temperature and extreme seasonal temperatures and their trends, but there has been very limited research into extreme wind chill temperature (WCT) trends. This project took hourly surface data from 156 different stations across the United States and Canada and examined trends in the statistical measure of the coldest 1% of WCTs, or the extreme WCTs, for three individual decades (i.e., 1980s, 1990s, and 2000s), as well as across the entire 30-year time period. Linear regression analyses were used to determine the trends at each station for decadal mean WCTs and decadal extreme WCTs. ArcGIS was used to visualize the spatial variation and magnitude of WCT trends.

These analyses indicated that cooling of both decadal mean WCT and decadal extreme WCT occurred in northern and western Canada and Alaska between the 1980s and 1990s. Additionally, there was warming between the 1990s and the 2000s for decadal mean WCT and decadal extreme WCT for the western and southern United States, as well as Alaska. Finally, trend analyses indicated that extreme WCT (a) cooled across a majority of the United States and Canada in the 1980s, (b) warmed across most of the United States and Canada in the 1990s, and (c) slightly cooled across most of the United States and eastern Canada in the 2000s.

WHAT ARE A COUPLE THOUSAND MEN BETWEEN FRIENDS: ANALYZING MATHEMATICS IN ARTHURIAN LITERATURE

Haley Okun

Readers of Arthurian texts, rarely keep a calculator on hand to make sure the mathematics used by the authors are correct. Thomas Malory, author of the exhaustive *Le Morte d'Arthur*, certainly does not double check his addition when he tosses in thousands of knights at the blink of an eye. Malory idealized knighthood and the fighting that accompanied it, and was quick to glorify that in his writing, with little attention paid to the realistic nature of these battles, sometimes miscalculating and misplacing entire armies in a single scene. Instead, he uses the numbers as a fantastical element to showcase King Arthur's prowess as a young ruler and skilled commander in battle.

Malory was not the only Arthurian author, however, and certainly does not represent all Arthurian authors' attitudes towards mathematics. Although some authors proceeded to disregard the integrity of numbers altogether, others sought to protect the sanctity of mathematics, weaving it expertly into their writing.

While authors may disagree on the sacredness of numbers, there is one indisputable element that cannot protect numbers: throughout the 500 plus years that separate our present day from the original writings, scribal error has been the cause of many textual discrepancies. In the original manuscripts, some numbers were totally made up, such as army sizes, whereas others, such as the Golden Ratio, were respected and represented throughout various texts. However, between permutations of translation and the centuries that these texts have spanned, between scribal error and omissions, it is hard to know what was intentional and what has been lost through time. When dealing with medieval literature, math is no longer a concrete concept.

POLITICS OF SPACE: ORGANIZING IN A “UNIQUELY URBAN” GENEVA, NY

Natasha Patel

My project explored two central questions: “What role do community organizations play in relation to urban politics?” and “How does this relationship promote and hinder community advancement?”

My curiosity about these questions came from my involvement in observing community organizing in Geneva around the issue of the former foundry for my Urban Politics course. In doing so, I began to be better aware of spatial exclusion in Geneva. Observing raised questions about the types of politics that grew out of organizing efforts. In pursuing this project further, patterns of gentrification became more evident. Gentrification is commonly thought of as displacement, but more recently and particularly in Geneva, the focus needs to shift towards whom the city is “developing” for.

Through my observations and discussions with community members, I was able to find that interactions within Geneva are often exclusionary along multiple lines: race, socioeconomic status, disability. Although these exclusions are not explicit, it is grounds to question overall effectiveness of mission-driven organizing born out of gentrified spaces. I hoped to find that organizing, even in gentrified spaces, would lead to the promotion of community activism. However, certain spaces hinder overall efforts.

IMPROVING MATERNAL AND NEWBORN HEALTH IN RURAL AND TRIBAL INDIA

Shweta Patel

India, due to its economic and infrastructural barriers, has been plagued with high rates of infant mortality (IMR). The Public Health Foundation of India (PHFI) works to address the limited institutional and systematic obstacles facing India by strengthening education, advancing research, and facilitating policy and practice in the area of Public Health. Although within the last two years the IMR has decreased by eight percent, there still remains a need for improvement of maternal and child health within rural and tribal areas of the country.

This past winter break, I had the opportunity to work on a research project in Bangalore, India with PHFI to develop a model for the diagnosis and community awareness of infectious diseases that lead to preterm births, congenital malformations, and a decrease in the mental health of the mother. The study hypothesized that a high level of stress during pregnancy in women living in rural and tribal India would have adverse effects on maternal and neonatal health. The model focused on the development of strategies and mechanisms for raising awareness on health care issues among women and their communities.

This particular study has been carried out in many different locations around India, and has been a three-year project. My involvement in this research project builds on my psychology and biology academic backgrounds, as well as international and cultural experiences. I thank the Padnos Family for funding my research and passions through the Padnos Family Endowed Internship and Travel Award, which supported my travel and living expenses while abroad.

THE SEEN YET UNSEEN BLACK MALE FIGURE: THE EPISTEMIC POSITION OF THE AFRICAN AMERICAN MALE IN 21ST CENTURY AMERICA

Luke Patmon

I examine the epistemic position of the African American male in the twenty-first century United States social climate. This inquiry serves as both a social epistemological look at the intersectionality of gender and race, and a personal investigation of my own experiences as an African American male.

I begin by surveying methods of understanding the current construction of racial identity. Following this, I look at the question of whether racial identity is beneficial to maintaining existence within American society. Looking at works from Kwame Anthony Appiah¹, Linda Alcoff², and Paul C Taylor³, I deduce that racial identity is a valuable epistemic experience for understanding our social world. My focus then shifts to seeing how the racial identity of Black or African American⁴ operates in combination with the gender identity of maleness. Using the work of George Yancy⁵, I draw upon his notion that the Black male figure is both hyper visible and invisible simultaneously. To overcome this peculiar intersectionality, I present my own concept of a “meta-moral” consciousness as a philosophical tool that helps the Black male navigate certain social situations.

This exploration into the intersectionality of blackness and maleness helps unearth the unique epistemic position of the Black male. Further, the development of my “meta-moral” consciousness offers a tool for the African American male to better understand the current American social sphere.

¹ Kwame Anthony Appiah *The Ethics of Identity* (New Jersey: Princeton University Press, 2005).

² Linda Alcoff, *The Future of Whiteness* (Cambridge: Polity Press 2015).

³ Paul C. Taylor, *Race: A Philosophical Introduction* (Second Edition: Polity).

⁴ African American is interchangeable with Black

⁵ George Yancy, “The Violent Weight Of Whiteness.” In *The Oxford Handbook Of Philosophy And Race*, 617. (New York: Oxford University Press, 2017).

RESILIENT DESIGN: HOUSING SOLUTIONS IN GENEVA, NY

Aubrey Phillips

Sustainability within housing is often designed using expensive technologies and fixtures through new construction. However, this model of sustainable “green” design is often not attainable to lower-income communities. Resilient design seeks to adapt and improve local living conditions that are seamlessly integrated into the local ecosystems.

I use both Geoscience and architectural planning to explore how to make sustainable, resilient design accessible to low-income communities in order to improve the longevity and quality of life of local housing. Through a case study of a vacant house in Geneva, I propose a series of repairs and solutions that can be implemented across the city. Recommended alterations are planned in accordance with climatological changes that are predicted for the future: more extreme heat, cold, and variable accessibility to water. The solutions are designed to meet an array of economic and budgetary restrictions. Through an examination of more passive sustainable solutions, I develop a series of design options that range in labor, efficiency, longevity, and effectiveness. This resilient redesign of local housing seeks to make sustainability attainable to the individual while aligning with the historical integrity of Geneva’s neighborhoods.

SIMULATIONS OF DYNAMIC ROUTING PROTOCOLS IN NEURAL SYSTEMS

Lauren Pomerantz

Currently, there are very few models of dynamic routing for brains. In order to carry out many tasks that humans do on a daily basis, our brain uses dynamic routing in order to get information from an origin node (neuron or group of neurons) to a destination node.

Some of the kinds of tasks that my research group is interested in are shifting attention without moving our eyes, selectively retrieving memories, and decision making. We are interested in looking at communication throughout the entire brain, with the eventual hope of limiting this to communication within the cortex. We are trying to model the information flow in the brain. With little guidance and instruction from past research, we are experimenting on a ground-breaking idea, which is making a comprehensive structural model of the architecture of the human brain.

The purpose of my research, as part of a research group at HWS, is to use computer models to demonstrate how the brain is able to function as a whole system.

FEAR THE MINSKY MOMENT: THE 2008 FINANCIAL CRISIS AND FINANCIAL SECTOR INNOVATION

Dylan Quay

Since the Great Depression, the evolution of economic policy has been influenced by apprehension surrounding the stability and functionality of the financial sector. As Hyman Minsky asserts in his *Financial Instability Hypothesis* (1977), capitalist economies tend to endogenously promote relationships between economic entities which make them inherently prone to debt crises.¹ Minsky also notes that financial innovation and engineering, impelled by the profit-seeking nature of financial institutions, often drives the use of old as well as the development of new financial instruments, creating a natural process in which new forms of financing increasingly push asset prices to unsustainable levels.²

In this paper I will analyze the 2007-2008 Financial Crisis from a Minsky Financial Instability approach, honing in on the exacerbation of asset bubble development, and subsequent instability, which materialized from various 20th and 21st century financial innovations such as securitization; thus, I hope to demonstrate how financial innovation, although a significant contributor to economic development, is not innately beneficial to the economy as a whole.

¹ Minsky, H. (1977). The Financial Instability Hypothesis: An Interpretation of Keynes and an Alternative to "Standard" Theory. *Nebraska Journal of Economics and Business*, 16(1), 5-16. Retrieved from <http://www.jstor.org/stable/40472569>

² Minsky, H. (1957). Central Banking and Money Market Changes. *The Quarterly Journal of Economics*, 71(2), 171-187. Retrieved from <http://www.jstor.org/stable/1883812>

ALPHA-SYNUCLEIN AND THE PATHOGENESIS OF PARKINSON'S DISEASE

Julia Raleigh

This project seeks to evaluate our current understanding of the molecular causes of Parkinson's disease, and to discuss exciting new possibilities for clinical treatment. Parkinson's disease (PD) is a neurodegenerative disorder that affects more than 10 million people worldwide¹. Neurodegenerative disorders affect neurons, which are specialized cells of the nervous system that make up the brain and spinal cord. Neurons degeneration is typically irreversible, and causes severe problems with movement and mental functions. Parkinson's disease is characterized by debilitating symptoms that impair movement and balance.² Although therapies exist that can treat the symptoms associated with Parkinson's disease, there is currently no way to reverse or cure the disease.

A central pathological finding associated with Parkinson's disease is the presence of aggregated clumps of proteins in the brain. These protein clumps cause damage to neurons by interfering with normal cellular processes, such as the production of energy and cell to cell communication. In PD, these protein aggregates are known to consist of a defective protein called alpha-synuclein.³ In this presentation, I will evaluate the role of the alpha-synuclein protein in healthy cells and how abnormalities in the function of the protein can cause PD. Finally, I will discuss novel therapeutic treatments that seek to reduce cellular levels of alpha-synuclein, which may prevent or reverse the progression of Parkinson's disease.

¹Tynes, O-B., and Storstein, A. (2017) Epidemiology of Parkinson's disease. *J. Neural Transm.* 8, 901-905.

² Faustini, G., Bono, F., Valerio, A., Pizzi, M., Spano, P., and Bellucci, A. (2017) Mitochondria and α -synuclein: Friends or Foes in the Pathogenesis of Parkinson's Disease? *Genes* 8, 377-386.

³ Spillantini, M., Schmidt, M., Lee, V., Trojanowski, J., Jakes, R., and Goedert, M. (1997) α -synuclein in Lewy bodies. *Nature* 388, 839-340.

STUDENT LOAN DEBT AND POST-COLLEGE EARNINGS

Alec Rhodes

Research shows that college graduates earn more on average than high school graduates,¹ yet, the institution of higher education also functions as a stratification system,² the degree to which American higher education contributes to or reduces earnings inequality partially depends on how students pay for school.³ In the face of stagnating household incomes and decreasing government support for grants and scholarships, student loans have emerged as the primary policy solution to ballooning costs of college.⁴ At the same time, the number of private for-profit institutions has increased, and students who attend these institutions are disproportionately likely to be low-income, and to rely heavily on loans to finance their education.⁵

I investigate the relationship between student loans and post-college earnings inequality using a sample drawn from the Educational Longitudinal Study, a nationally representative dataset following students from 2002 until 2012. My analysis suggests that earnings vary by student loan usage, even after controlling for social background characteristics, institutional context, college outcomes (such as GPA), and post-college labor market experiences. Students who used loans to finance their college education have lower average early career earnings than students who do not. Estimates also suggest that students that were highly-involved in extracurricular activities have higher average earnings than those who were not.

My results raise questions about the earnings tradeoffs between loans and other funding sources (such as part-time work), and their implications for extracurricular activity participation among college students.⁶ I argue policy approaches to equalizing access to college education must take into account that the implications for post-college earnings inequality.

¹ Kroeger, K., & Gould, E. (2017). *The Class of 2017. Raising America's Pay*. Washington, DC: The Economic Policy Institute.

² Alon, S. (2009). The Evolution of Class Inequality in Higher Education: Competition, Exclusion, and Adaptation. *American Sociological Review*, 74(3), 731-755.

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AMERICAN JEWISH ATHLETES: IMMIGRANTS TO HEROS

Dana M. Riback

Growing up as an American Jewish athlete, I was always curious about why there did not seem to be many Jewish individuals who play professionally in America. Therefore, as part of my research for Religion 272, Sociology of the American Jew, I decided to research barriers inhibiting Jewish American participation in professional athletics. While my research focus originally was on professional sports in general, it soon narrowed to focus on primarily (although not exclusively) on baseball because of the popularity of baseball in the early 1900s, a time of both increased attention to professional sports and of immigration from Eastern Europe.

Using a variety of historical and sociological sources, I hope to address how the connections between baseball's position as the "All-American Sport" and immigrants' desire to assimilate transformed the lives of many immigrant children in the 1900s. I expect to discuss the ways in which stereotypes impacted Jewish participation in various athletic games, both inhibiting participation but in some cases encouraging individuals' participation. Today, it is imperative to have Jewish Athletic heroes in America's most popular sports in order to encourage the younger generation of American Jewish athletes as well as spread awareness about Jewish culture.

RECIDIVISM RISK FACTORS FOR ADOLESCENT SEXUAL OFFENDERS

Emily K. Robinson

Research in the area of adolescent sexual offenders has increased in the past decade, but there remains wide gaps between understandings of recidivism into adulthood. Generally, recidivism rates for adolescent sexual offenders against children are low, with some research citing it as being as low as 7% in the five years following the original offense (Letourneau et al., 2017). For adults, however, child sex offenders with the highest risk of recidivism often began patterns of sexual offense in adolescence.

Combinations of physical and emotional abuse, sexual abuse, early exposure to sex and pornography, and various personality traits are some of the more common risk factors for adolescent perpetration (Daversa & Knight, 2007; Letourneau et al., 2017). Attachment style and dependency traits have also been cited as a potential risk factors for both adolescent and adult sexual offenders against children (Marshall, Serran, & Cortoni, 2000; Simons, Wurtele, & Durham, 2008; Bornstein, 2005).

Though adult and adolescent offenders have some similar characteristics, there are often key distinctions both in individual and offense characteristics (Shaw et al., 2000). The presence of such gaps between adolescent and adult makes clear the need for future research identifying risk factors for long terms recidivism through the transition from adolescence into adulthood.

WHAT CAN SOCIAL REPRODUCTION TELL US ABOUT THE ONGOING LEGACY OF SLAVERY IN THE UNITED STATES? AN AFRO-PESSIMISTIC PERSPECTIVE

Isabel Rubio

This project applies social reproduction theory to an afro-pessimism framework to explain how and why a society built on racial differences and the unspeakable oppression of a group of people was able to get away with such a horrific deed, and substantiates the idea that the order produced and maintained through social reproduction is an integral feature of American capitalism. This suggests that true equality and freedom for all will never be achieved under this system.

Social reproduction refers to the work that goes into the production of the labor force. Based on a literature review of social reproduction theory, I argue that social reproduction, (which takes place in the household but can also take place in public institutions) and production are distinct forms of work but are also influenced by each other, and social reproduction is largely treated as “invisible labor.” I applied the theory to the work *Scenes of Subjection* by Saidiya Hartman, which is written from an afro-pessimistic perspective, and conclude that racialized practices of social reproduction led to the perpetuation of the submissive status of blacks in society through racialized differences in productive and social labor. I then draw from the work of Frank Wilderson to explore the implications of slavery’s legacy.

I argue that the white patriarchal male established his value and hegemony through slavery, and controlled the social reproductive work of blacks in order to remain in this position. Therefore, the racially based social order that came to exist as a result of this activity can be seen as a central aspect of the United States’ capitalist society.

UNTOLD STORIES OF COLLEGE STUDENTS WITH AN INCARCERATED FAMILY MEMBER

Samantha Ruthazer

Little published research focuses on adolescents who have an incarcerated parent or family member and who attend higher education. I interviewed college students who previously or currently have an incarcerated family member. The goal of this project was to both produce data about this topic as well as to give these students a place to share their stories. Another goal was to find ways that the HWS community is either welcoming for these students, or to gain insight into techniques to create more support on campus.

I completed in-depth interviews with eight Hobart and William Smith students, from a range of class years, who had an incarcerated family member. The interview guide included questions on topics such as overall relationship with the incarcerated family members, social interactions on campus, stigma and stigma management, academic and extracurricular involvement on campus, relationships and support base, and other general questions about participants experiences. One notable finding was that the majority of participants felt a strong support from their family and the incarcerated family member, but less strong support on campus. One outcome of this research is a possible on-campus group for those with family trauma; this idea was developed by a participant and was supported by other participants.

The HWS administrative community, as well as other members of the higher education community, may use this research in an effort to help improve students' experiences. It could also be used in the future to help develop programs on campus or lay the foundation for future research in this field.

JUST FOOD? INTENTIONS AND REALITY OF FINGER LAKES COMMUNITY SUPPORTED AGRICULTURE

Maggie Santinelli

My project worked to uncover the diverse meanings of Community Supported Agriculture (CSA) through an examination of three farms: Fellenz Family Farm, Sweet Land Farm, and Ever Green Farm. I was interested in the extent to which CSA's can help citizens to understand the power of fresh and local produce to create connections to nature, foster sustainable practices, and appreciate the value of investing in one's local community.

In order to explore these ideas and practice of each farm, I interviewed the farmers, as well as the members of the CSA, and learned about the differences between CSAs, as well as how they work to accomplish the same goals. Overall, membership provides members with a chance to connect to nature and learn a little about sustainable farming practices; however, they often do not experience the sense of community that one might assume comes with participation.

EMOTION AND CONTROL: GENDER CONSTRUCTION
THROUGH THE WORKS OF ANNE TERESA DE KEERSMAEKER

Andrew Scammell

Anne Teresa De Keersmaeker is a contemporary Belgian choreographer born in 1960 and known for her installation of geometry, patterns, and structure. De Keersmaeker's works are not crafted with the sole objective of entertainment; they often possess passionate, sentient attributes despite their mathematical construction.¹

Because De Keersmaeker works primarily with female-identifying dancers, this project, inspired from my coursework in 20th Century Dance History, seeks to promote discussion focused on the following question: "Does De Keersmaeker's preference for unexpressive, geometric, and minimalist dancing reflect or suggest anything about avoiding the female stereotype of 'emotional?'"

Through an analysis of De Keersmaeker's work and artistic statements, along with critiques of her work and Ann Cooper Albright's theories,² I have come to the assertion that De Keersmaeker's choreographic preferences reestablishes women as beings capable and conscious of controlling their inner sentiments, contradictory to the social assumption of female bodies being "emotional." I aim to further expand this project by examining the implications of Beyoncé's "borrowing" of De Keersmaeker's choreography, arguably stealing De Keersmaeker's deliberate gender reconstruction. This hypothesis reflects contemporary tensions around intellectual property and includes choreography and the field of dance in ethical questions about copyright.

¹ sadlerswells. "Inside Dance: Rosas Early Works." *Youtube*, Youtube, 8 Feb. 2011, www.youtube.com/watch?v=l_cc64lmkLk.

² Albright, Ann Cooper. "Mining the Dancefield: Feminist Theory and Contemporary Dance." *Choreographing Difference: The Body and Identity in Contemporary Dance*, University Press of New England, 1997, pp. 1-27.

CONTINUOUS VALUATIONS OF BESPOKE DERIVATIVES USING SMART CONTRACTS AND BLOCKCHAIN SOLUTIONS

Andrew Seski and John Zirnkilton

By examining the systematic market failures that remain today, post-2008 financial crisis, we identified a unique application for the introduction of innovative technology in reducing asymmetric information, reducing moral hazard of third party institutions, providing increased liquidity in debt markets, and increased price discovery for intricate financial instruments. These benefits are obtained by creating smart contracts, recorded on blockchains to break up massive collateralized debt contracts typically sold in tranches, for the purpose of continuous valuation.

Blockchains are immutable, public ledgers that are decentralized from institutions such as banks and governments; with the removal of intermediaries and the transparency of the ledger, information and transactions can efficiently flow between peers, or even between countries, without third party companies. Our specific iteration with this technological breakthrough is through the theoretical creation of a specific smart contract, which is a self-executing, digital facilitation of transactions. The introduction of smart contracts would then allow for the public sharing of risk between peers with or without intermediaries with a far greater pool of potential buyers and sellers, and far greater visibility in contrast to quarterly valuations by investment banks.

These changes in the recording of financial instruments on public blockchains is greater than the cryptocurrency fads and short-term arbitrage focus, but represent a social good in visibility into an opaque, and mistrusted banking environment in the U.S.

MANUFACTURED CONSENT: WOMEN IN THE CONSTRUCTION OF MIDDLE-CLASS COMPLICITY DURING ARGENTINA'S DIRTY WAR (1976-1983)

Julia Sipos

Argentina's military dictatorship became a state-sponsored apparatus of repression in 1976. The existing literature about Argentina's "Dirty War" explains how state terror regimes instill middle-class complicity through the construction of narratives and illusions of national progress. Through the lens of constructivism, my Honors project attempts to unpack the role of women in reinforcing middle-class consent: government narratives not only concealed the brutality of violence and legitimized the junta's actions, but granted women a new social position to help combat "subversion" in society.

By analyzing primary documents, including speeches, advertisements, and public relations campaigns in the media, as well as conducting discourse analysis, I use an interdisciplinary approach to identify the sociopolitical factors that contributed to this history and how Argentine women helped construct narratives that are unique to the Argentine case. While Argentine violence closely resembles the outbreaks of guerrilla warfare and military regimes in the Southern Cone, the dissemination of propaganda in the media and social roles of women in contributing to middle-class complicity distinguishes Argentina's Dirty War from the dictatorships of Chile, Brazil and even Nazi Germany.

REWARDS AND RISKS OF SOCIAL MEDIA ENGAGEMENT: VARIATION BY RACE AND GENDER

Julia Sipos

Social media is ubiquitous on college campuses and embedded in college students' daily lives.¹ In the research literature on college students' use of social media, there is a silence about racial variation and the impact of social media on students' interactions, which my research unpacks. In Fall 2017, I was part of a research group that explored variation by race and gender in ten HWS seniors' use of Facebook and Instagram. In Spring 2018, I recoded the interview data to expand the analyses begun in the prior semester about how these students described the benefits and risks of engaging or not engaging on social media sites.

All participants felt self-inflicted pressure to create their accounts at one time. Risks and rewards of engaging or not centered around the impact on face-to-face connection and maintaining personal ties.

The findings suggest that students experience an online and offline tradeoff with social media use, as students feel they lose face-to-face interaction by not engaging, but engaging too much reduces meaning in the real world. Males and nonwhite students said there were no benefits to not engaging, while women and nonwhite students spoke about more risks and rewards associated with both engaging or not. Males spoke about economic benefits of engaging, but women were more concerned with personal connections.

¹ Bailey, Jane, Steeves, Valerie, Burkell, Jacquelyn, Regan, Priscilla. "Negotiating With Gender Stereotypes on Social Networking Sites." *Journal of Communication Inquiry*, vol. 37, no. 2, 2013, pp. 91–112., doi:10.1177/0196859912473777.

ART IN THE WOMEN'S MARCH 2017-2018: SOCIAL PROTEST AND VISUAL CULTURE

Jamie L. Slusser

Social movements are an integral part of American culture and history. These movements can draw on existing social structures in order to make use of and create iconic artistic culture, like the freedom songs sung during the Civil Rights movement or the red ribbon and AIDS quilt in the fight against HIV/AIDS. My project will focus on the Women's March movement in Washington, DC and Seneca Falls, NY in 2017-2018 and the artistic culture, specifically visual culture that was created and used by organizers and participants.

Social movement theorists, like T.V. Reed, have argued that social structures and the use of them can determine the success and sustainability of social movements. My project posits social media as a social structure: I will select images that were posted to the social media platform Instagram that include a visual component, like a drawing, costume, or other piece of visual art, and I will organize the images into categories for analysis.

Combining the use of social media theory and art analysis, I will draw on the methods of scholars who have examined social movements and my knowledge of Art History to analyze the Instagram images. Pending approval from the Institutional Review Board, I also hope to survey the Instagram users whose images I analyze to understand why the images were significant, and what other visual images they found iconic. I expect my project to provide insight about the role of social media in the sustainability of modern social movements.

PROJECT MIDWIFERY

Gabriel Smith

As part of my Senior Capstone Entrepreneurial Studies project, I am designing a private midwife service within an urban community. The aim is to educate and aid young women (and male partners) about proper maternal care during pregnancy and post pregnancy. The target group of women will be young women ages 16-25.

I began this project, first, to learn more about the reasons behind the health care service gaps in America. I also want to learn what it takes to provide proper education and see whether this idea could be a viable way to provide this service.

My research will consist of both online research and “on-the-ground” research. The online research will help me learn about local and state-based healthcare models that involve midwifery, comparative models in the United Kingdom, and whether this service should be public or not for profit. The “on-the-ground” research will consist of interviews with individuals in state healthcare departments, several hospitals, and Planned Parenthood, to gather insight into the barriers for young women to effective healthcare and education about pregnancy.

THE INS AND OUTS OF PRISON GANGS IN AMERICA

Morgan Stevens

The word “gang” evokes images of common street gangs that the mainstream media have glorified. The gangs that tend to be invisible to the public are the ones that operate in prison. The prison gangs I chose to research are the four oldest and most notorious gangs: The Mexican Mafia, Nuestra Familia, Aryan Brotherhood, and Black Guerrilla Family. I examined each of these gangs separately, researching the values they were founded upon, their connection to race, and how they operate in prison. My research is comprised of member-authored books, films that claim to display an accurate picture of prison gang life, and materials written by law enforcement that documented these gangs.

Prison gangs are powerful, violent, and strategic groups that are deeply rooted in prisons across America. Deprivations within the prison environments are what ultimately led to the emergence of prison gangs, which have now come to act as organized crime groups. An understanding of power and racial inequality that guided my research, and I argue that a compassionate, yet critical outlook on prison gangs is necessary to put an end to their violence. From a sociological perspective on prisoner rights to control their incarcerated destiny, I propose a pathway toward ending the inevitability of violent prison gangs.

A DESERT IN THE URBAN RAINFOREST

Mallory Stewart

The USDA defines a food desert being an area that lacks fresh fruits, vegetables, and other healthful whole foods. These deserts are usually found in impoverished areas, largely due to a lack of grocery stores, farmers' markets and healthy food providers. Even though Geneva is in an agriculturally abundant area, food deserts are a cause for concern. The health and other disparities that persist in Geneva limit access to healthy and fresh produce.

Through archival research and GIS mapping, I aim to show the food deserts that have emerged in parts of Geneva. To understand the current situation of food accessibility in Geneva, activists who are working on this problem are the best source to understand the situation because they have had first hand experience, so I will be interviewing local activists in these specific neighborhoods.

Food deserts are a product of communities in disadvantaged circumstances; the solutions need to establish community capabilities in education and distribution. Increasing the distribution of healthy, fresh foods will create a more equal accessibility to our rich agriculture resource.

WHAT CAME FIRST, THE PAYCHECK OR THE DRINK? ALCOHOL CONSUMPTION AND INCOME

Emma Stromback

Heavy alcohol consumption is the highest among high-income, educated white Americans. Furthermore, the presence of Alcohol consumption is evident college campuses all across the US and has shaped the college culture and experience; Binge drinking is an increasing phenomenon across the country, and binge drinking has specifically increased in the past decades among the youth, particularly by College students. Binge drinking is a serious, but preventable public health problem. Binge drinking is the most common, costly, and deadly pattern of excessive alcohol use in the United States: it was responsible for \$191 billion in costs in 2010. Thus, Binge drinking has serious socioeconomic impacts for the United States.

My goal in this project is to examine the relationship of alcohol consumption and income. This paper uses a sample of data from the survey National Longitudinal Survey of Youth (NLSY97) from the Bureau of Labor Statistics (BLS). Although typically not significant, some levels of Binge drinking are shown to demonstrate some level of impact on income. Results show significant impacts of education levels on income, and for gender both at statistically significant levels; however, binge drinking and heavy binge drinking were not found significant at expected levels. Possible reasons for the results are discussed.

DOUBLE BIND: HOW FEMALE ATHLETES EXPERIENCE OPPORTUNITY AND OBJECTIFICATION

Jennifer Sullivan

For my honors project in Sociology, I examined how female athletes experience the paradox between opportunity and objectification in athletics. Because of the enactment of Title IX, there are more opportunities for women in sport; however, despite these opportunities, women are continually told to perform certain gender behaviors, while having their bodies objectified and sexualized.

To understand this paradox, in-depth interviews were conducted with female athletes of different ages to explore how this paradox has evolved and changed over time. The interviews are not only used to understand the participant's individual experiences, but to identify the connections, similarities, and differences between all the responses. By focusing on how female athletes experience the paradox between opportunity and objectification, this study seeks to uncover how female athletes conceptualize this paradox. Is there any difference in answers among women of differing ages? How do female athletes find agency within the broader paradox?

LOST IN THE SHUFFLE: AMERICA'S 21ST CENTURY SOCIAL STUDIES CURRICULUM

Kevin Teel

In the 1990's, the Clinton administration introduced the very first attempt at legislation to set national goals for education. While the plan was ultimately null and void because it failed to outline how any of the goals would actually be achieved, it set the stage for further national-level involvement in education in the 21st century. During the subsequent Bush and Obama administrations, the nation was introduced to the No Child Left Behind Act, the Race to the Top Initiative, and the implementation of Common Core Standards in 42 of 50 states and the District of Columbia. All of these national initiatives place(d) a heavy emphasis explicitly on literacy and math, and social studies itself felt the impact. The manner in which teachers are supposed to teach social studies has had to change in order to accommodate the higher demand for proficiency in reading and writing.

Literacy has always been an important tool for social studies education, but literacy is only one tool through which to approach a much more complex discipline. The new standards, however, make it more difficult for teachers to balance using literacy as just one tool to examine social studies, and using the discipline of social studies as a means to teach literacy. My paper examines what changes have occurred to the American social studies curriculum as a result of these 21st century initiatives, whether or not these changes have actually been effective, and how the current state of American social studies education compares to the state of social studies education in other developed countries.

AMAZON, PANDORA, AND HERCULES: GREEK MYTH IN POPULAR CULTURE

Melissa Tyler

Greek mythology is alive and well today in our western popular culture, including in the names of cities in Central New York, like Syracuse, Ithaca, Homer, and many others. As a Media and Society major with a triple minor in Music, History, and Classics, my Independent Study on music and myth has grown into a larger study of myth and gender in popular culture.

The goal of my project is to explore how Greek myths are used in popular culture and whether their meaning has changed since classical times. My research is largely statistics-based, drawing from approximately sixty to over one hundred sample works in each medium. Over the course of the semester, my project has incorporated a focus on gender and how ancient gender stereotypes reflected in myths are present in popular culture. My final project will be in a multi-media format so that I can fully show musical and film examples that I have been studying.

In my research, I have discovered that the myths are often reduced to their simplest traits, causing us to idealize figures who in actuality had many negative as well as positive traits. I have learned that mythology manifests differently in various media: music revolves around mythological stories, film and television focuses on the hero trope, and advertising revives the gods and goddesses. Advertising and film are reductive and idealizing in their portrayal of myths, but, music shows myths in a more complex and balanced way. I have also been forced to question whether the endurance of myths has positively impacted our society or whether myths have kept women locked into negative stereotypes.

THE AESTHETICS AND ART OF WINE

Charlotte Wells

My Honors project in Philosophy explores the nature of fine wines, arguing that high quality, authentic wines can be an object of aesthetic appreciation and art. This is a project I have been working on throughout the past year; but it is also a notion that I have been considering for many years now as my appreciation for wine has further progressed.

There exists a hierarchy of the senses in philosophy, which has functioned to maintain taste and touch as assuming lower roles in regards to human cognition and art, thus excluding wine from artistic and aesthetic potential or consideration. I argue that this hierarchy needs to be dismissed, and instead to consider the deeply valuable, complex, rich, and objective features of fine wines that elevate their status to an object of art and aesthetics. I consider the parallels between wine and traditionally recognized forms of art, such as music and painting, using these congruencies to further illustrate how certain types of wine should be considered an art to recognize their inherent value.

This project combines my academic interest in my philosophy major with my personal interest in wine. It has been developed through the various philosophy courses I have taken, personal interviews with wine professionals, tours of wineries in the Provence region of France during my study abroad semester, and reading and reflecting on a multitude of aestheticians' accounts of the arts and aesthetics.

