## ST. THOMAS AQUINAS COLLEGE

 1 st ANNUAL ART, DESIGN \& SCHOLARSHIP EXHIBITION

## Ignite your curiosity. Ignite your imagination.

Welcome to Ignite: St. Thomas Aquinas College's First Annual Art, Design, and Scholarship Exhibition. Ignite is a celebration of our undergraduate students, their research, and their creativity as demonstrated in a variety of disciplines across campus. The scope of these presentations showcases the outstanding caliber of our undergraduate students at St. Thomas Aquinas College. We hope that this exhibition will ignite a passion for discovery and ingenuity in all of our students for years to come.

The projects on display also demonstrate the ongoing commitment of our faculty to supporting undergraduate research. As is true of the professors who support them, these students, through their work, hold the potential to contribute positively to the world. Each of these students has benefitted from mentoring provided by our exceptional faculty, and we thank the faculty for their efforts on behalf of these students.

We encourage you to engage with the excellent work in this showcase - visit the poster presentations, view the exhibits on display in our gallery, and read the collection of abstracts included in this program.

Organized and curated by

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Assistant Professor of
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Growing up during the age of technological takeover, college students remain completely dependent on a constant access to information provided by devices as small as the palm of their hands.

Some may view this reliance as a developmental disadvantage, but others may argue that the technological age has produced some of the most independent, self educated, and entrepreneurial adolescents to ever exist. Looking to obvious sources like YouTube and Social Media, it is not hard to conclude that humans born after 1985 possess a knowledge and understanding of the modern digital landscape unlike any ancestors that came before them. This phenomenon of instant gratification, communication, and information has not only changed the human mind, but invented a new way of thinking and solving problems. In order to attract young and financially conscious students, personal investment firms will have to adopt new practices into their corporate structure that align with the new age philosophies of a cyber driven generation of investors.

## Students Studying Therapeutic Recreation Give Residents Diagnosed with Alzheimer's Disease a Voice

Rachel Biancardi, Alexa Caggiano, Janelys Hernandez, Rohan Lawrence, Justin Liguori, Alex Vail Mentor: Linda Levine-Madori, Ph.D., Professor of Therapeutic Recreation

This paper describes a pilot study conducted at Dowling Gardens, in Sparkill, New York during the Fall semester of 2015. Dowling gardens is an independent senior living center, however, in the recent past, residents are starting to be diagnosed in the early stages of Alzheimer's disease. This
poster describes an eight-week quasi-experimental, pre-post design. For the eight-week period, students from St. Thomas Aquinas College were paired with residents diagnosed with early onset Alzheimer's disease. The pre-post test questions were designed to measure mood, memory, psychosocial, and relaxation. The results of this study showed a significant correlation to participation in TTAP Method ${ }^{\circ}$ (programming which utilized meditation before every therapeutic recreation intervention) to enhance self-reported feelings of increased memory abilities, significant mood enhancement, mood and overall feelings of relaxation.

## Discord and Harmony: Gendered Treatments of the Environment in the Literature of Wild and Into the Wild

Fiona Egan<br>Mentor: Rachel Golland, M.Ed., Instructor of English

Utilizing a feminist and ecofeminist lens, we observe and analyze, through the books Wild and Into the Wild, whether gender affects how an individual interacts with the natural environment. Utilizing a qualitative ethnographic study of narrative texts we assess patriarchal and matriarchal treatments of nature as reflected by Christopher McCandless, and Cheryl Strayed's narrative accounts of human interaction with the native environments of California, Oregon and Alaska. We engage in posing questions, note taking, mapping overarching themes, surveying character behavior, delineating influences of gender and coding quotes. The findings yield a distinction between McCandless's disrup-

## ART THERAPY

Angela Gallo Order and Chaos in Nature acrylic on canvas Joseph Weil Elvis acrylic on canvas

tive treatment and Strayed's symbiotic approaches to the natural environment. Implications raised for further study are: investigating how a literary understanding of gender attitudes toward nature can assist in science and nature decision-making; considering quantitative statistics on the gender ratio of environmental scientists and lawmakers to strengthen our findings and influence decision-making processes.

## Measuring 11-Ketotestosterone Levels in the Adult Convict Cichlid in the Presence of Competition

Julia Byman, Alice Kim, Shaunna Simmons, Emily Smith Mentor: Ryan Wynne, Ph.D., Associate Professor of Biology

Hormones are known to play a significant role in sexual reproduction, aggression, learning, memory, and the protection of the brain from degeneration. Analysis of hormone levels in a variety of animals has shown a strong correlation between animal behavior and changes in circulating hormone levels. The convict cichlid (Amatitlania nigrofasciata) has been extensively studied in relation to behavior; specifically courtship, bi-parental care, and territoriality. Recently, questions regarding hormone levels (specifically 11-ketotestosterone) in the male convict cichlid have been asked. However, little is known regarding 11KT levels in females. The goal of the present study is to profile circulating levels of plasma 11 KT in the female convict cichlid in the presence and absence of a female competitor using a commercially available enzyme immunoassay. The examination of the circulating levels of 11KT is critical in determining the role hormones play in the manifestation of reproductive behavior in the convict cichlid.

## ART THERAPY

Benjamine Pena Untitled: Face Studies watercolor
CRIMINAL JUSTICE/ VISUAL ART MINOR
Lauren Hernandez Sameness in Difference digital photographs


## Rewriting America to Fit Our Ideologies: A Game the Whole Family Can Play!

SarahJo Montello<br>Mentor: Craig Martin, Ph.D., Associate Professor of Religious Studies

In modern America, it is fairly easy to find ways that the national identity is in discordance with the nature of reality. It is also clear, when given evidence provided by American culture itself, that this national identity is one interwoven with Protestant ideals. This is precisely how such a historically inaccurate delusion has continued to be perpetuated- all one needs to do is to access some authority, and what better authority figure than God himself? In this paper we will aim to unravel this intertwining of national narrative and religious narrative and analyze how the interchangeability of rhetorical techniques used first in the context of religion and then adopted into politics tend to falsely legitimate political claims. In other words, we will examine both the religious and the politique americaine to discern how borrowing and fairly apparent cross-over seems to be used to in order to strengthen the latter.


# Do the Returns to Community Colleges Differ Between Academic and Vocational Programs: Revisited 

Eugene Foley<br>Mentor: Meghan Mihal, Ph.D., Assistant Professor of Economics

Using an updated data set, NLSY-1996, we revisit the findings from Gill and Leigh (2001). We expect to find consistency across the findings of Gill and Leigh. First, we expect that students earning potential is not differentiated by students who start at a community college compared to those who start at a four-year institution. Next, we anticipate that students who are in a terminal or vocational community college program will experience higher earnings than students who do not complete their four-year college degree. Further, the improvement in earnings is greater for students who drop out of college at any level than for students who do not continue their education beyond high school. Lastly, we expect to show that students who choose to go to community college for vocational training programs over four-year institutions do so because of comparative advantage and they are better suited for vocational jobs than baccalaureate students.

## Symmetries of the Hypercubes

Lindsey Heiberger, Heather Palmer, Daniel Viaud
Mentor: Meghan DeWitt, Ph.D., Assistant Professor of Mathematics
We look at the construction of n-dimensional hypercubes from (n-1)-dimensional hypercubes and look at various ways of visualizing the first five dimen-

## EDUCATIONAL STUDIES <br> Elizabeth Harper Compass Points the Way graphite on charcoal paper


sions of hypercubes using 2D and 3D modeling. We explore the relationship between the external dimension of a hypercube and its internal elements when increasing either external dimension or internal dimension by one. Let Xn,m be the number of m -dimensional faces inside of an n-dimensional hypercube. We prove, by induction on $\mathrm{k}=\mathrm{n}+\mathrm{m}$, the following recursive formula:

$$
x_{n, m}=2 x_{n-1, m}+x_{n-1, m-1}
$$

We explore the symmetric group of the n-dimensional hypercube, and discuss the relationship between the internal makeup of an n-dimensional hypercube and the size of the hypercube's symmetric group. We then describe the alteration in the size of the multiplication table if different dimensions are allowed during the hypercube's rotations. Last, we will examine the relationship between the multiplication table of a square and higher dimensional hypercubes.

## Narcissism and Social Network Usage Among Adolescents and Adults

Courtney Gray
Mentor: Benjamin Wagner, Ph.D., Assistant Professor of Psychology
Trait narcissism has seldom been studied in relation to motives for posting on social media platforms. Psychological literature has also failed to report on the frequency with which individuals high in narcissism post across multiple social media platforms. The current study draws on the belief that narcissists are motivated to post on social media more frequently and for self-presentational reasons, compared to those who did not rank high in narcissism. Participants ( $\mathrm{N}=32$ ) completed several self-report measures including the Narcissistic Personality Inventory-16 (NPI-16), a researcher-generated social media use survey including ten different platforms (Facebook, Instagram, Twitter, Tumblr, Snapchat, Pinterest, YouTube, Vine, Linkedln, and Reddit), and other personality measures. Consistent with the hypothesis, participants who scored higher on the NPI-16 reported a higher frequency of use across multiple social media platforms. Despite the fact that narcissism levels positively predicted regularity of posting, personality motives such as extroversion did not.

Hand in Hand Organization: Feeding People's Hope and Purpose<br>Jessika Platon<br>Mentor: Christian J. Churchill, Ph.D., Professor of Sociology

The aim of this research is to investigate the extent of a local food pantry's role in society, particularly its role in the lower-working class. The almost two and a half month long worth of data was collected by joining the organization as a volunteer and applying the participant - observer methodology, as well as published news and articles. Through this method, I was able to fully interact with both sides of the spectrum - the people working in the organization and
its beneficiaries. This research revealed how a food pantry, known for providing goods and services to struggling individuals and families also provides an often overlooked degree of support - emotional support.

## You're Hired! The Impact of Personality on Professional Performance and Evaluations

Danielle D'Ambrozio
Mentor: Benjamin Wagner, Ph.D., Assistant Professor of Psychology
This study investigates the relationship between personality and academic performance, and may also shed light on the relationship between academic performance and job performance and hiring. Additionally, this study explores the relationship between the Big Five personality dimensions and the quality of professional references. We believe that academic performance and high-quality references determine the likelihood of post-graduation hiring and, as such, are important variables in the prediction of a number of occupational outcomes. The Ten Item Personality Measure (TIPI; Gosling et al., 2003) was used to measure five personality dimensions in a sample of undergraduate students. An academic performance-rating questionnaire, which included a "quality of reference" section, was completed by the students' professor. We hypothesized that conscientiousness will have the strongest association with overall academic performance and the likelihood of a professor providing high-quality academic references. Findings may relate to issues in personnel selection and promotion.

## ART THERAPY

Erica Morgo Untitled: Thanatos acrylic on canvas
Grace Lee Studies in Empathy india ink on rag paper (detail)


# "Calm Resignation": Death as Freedom for Fallen Women in The Coquette and The Awakening 

Alyssa Hamilton
Mentor: Staci Shultz, Ph.D., Assistant Professor of English
This paper examines how social expectations do not allow for dissident behavior in marginalized groups, specifically women, in nineteenth century American literature. The main characters Eliza of The Coquette and Edna of The Awakening are analyzed as women behaving subversively in their time, especially in their relationships with men, their attitudes concerning motherhood and marriage, and their economic digressions. Mariana Valverde's article "The Love of Finery: Fashion and the Fallen Woman in Nineteenth-Century Social Discourse" is used to illuminate how these characters are defined as fallen women and how their economic presentations indicate their fate. Ultimately, the only freedom for these characters from social convention is death.

## "The Sirens" and "Hazen, Nevada"

Alyssa Hamilton
Mentor: Monica Wendel, M.F.A., Assistant Professor of Composition and Creative Writing
In these two short stories, I examine mother-daughter relationships, substance abuse, and the subjective/unreliable nature of reality and language. I use stream

of consciousness techniques to exploit the disconnect between language and the reality it seeks to represent, resulting in psychological and often surrealist overtones. Both works are somewhat ekphrastic in nature, either directly addressing these inspirations, or referencing imagery from visual art. "The Sirens" looks at a woman unable to have children moving towards accepting her infertility in a surrealist journey through a hospital. "Hazen, Nevada" engages with a young woman addicted to crystal meth moving towards the acceptance of the childhood trauma of her mother's own overdose as she is walking along Route 50. Both pieces engage with ideas surrounding processes of grief, how motherhood is conceptualized by society, and how the mind functions on the edge of a person's breaking point.

## Put Up or Shut Up

Rohan Lawrence<br>Mentor: Christian J. Churchill, Ph.D., Professor of Sociology

Stress can be harmful. How Emergent adults handle it could be even more dangerous. It is the individual or group to decide whether they will succumb to defeatism or rise to the occasion. Which of the two do adolescents tend to do? College can become a trying time for students, facing academic and occupational duties, while maintaining the various relationships and events in their lives. Moments that shape them forever. The question becomes: how do they regulate stress when it becomes out of their control? Do they stay strong or let stress sway their decision making? My research gave surprising insight on how they think. Research Methods borrowed from ethnographers like Kurt Wolf,

## GRAPHIC DESIGN

Chris Silva Mosh Pit branding and collateral (Illustrator and Photoshop) James Brinkley Tiger digital illustration (Illustrator)


BAR AND GRILL


George Simmel, Mitchell Duneier and others shed some light on a big question that could be asked of everyone on earth. Do Emergent Adults rise to the occasion or don't they?

## "CALTEXX": A participant observer's extraordinary experiences to an ordinary place

Jennika Platon<br>Mentor: Christian J. Churchill, Ph.D., Professor of Sociology

As America's commuters, we are the inevitable and consistent customers of gas stations. The addition of convenience stores to most gas stations helped us deal with this fast-paced world. Consequently, this added feature has also created unique social settings in our communities. This research examines the social dynamic of a particular gas station in New Jersey. This is an ethnographic research that focuses on the roles of the characters and the implication of their movement to the setting. This study showcases the specific characters and groups of people that are frequently present in the setting, the observations conducted and the interactions between these characters and groups. In order to gather substantial data relevant to the issue, it felt necessary to become a participant observer and a team member of Caltexx. It may seem like an ordinary gas station where people come and go, but this particular "coming and going" movement resonates an idea prevalent in America; Immigration.


# The Loss of Leisure: Reclaiming the Concept for the Modern Worker 

Thomas Schumann
Mentor: Nikolas Papavlassopulos, Ph.D., Professor of Finance and Business Administration
This paper examines the purposes \& realities involved in leisure time in recent years from both philosophical and economic concerns. It considers the historical elements of leisure, from holidays to the concept of the "work-week," as well as how the enlightenment \& developments in humanism resulted in a change in the generally understood purpose of life. Following capitalism, which eventually corrected initial errors in leisure by lending greater standards of living to the poor, leisure was no longer about bettering the individual to contribute to common good of polity or individual salvation but to "pursue happiness." This paper argues that it is critical to reclaim leisure as something which contributes to the common good. A shift in focus from individualism to family-based economics is needed to accomplish this. Ultimately, it will demonstrate that people with less economic worries are more inclined to seek positive leisure time.

## Of Scholars and Meta-Theory: An Examination of the Role of Method and Theory in the Study of Religion

Savannah Finver
Mentor: Craig Martin, Ph.D., Associate Professor of Religious Studies
It is with relative rarity that undergraduates have the opportunity to reflect in depth upon the ways in which the structure of a course serves to open up

## GRAPHIC DESIGN

Ashley Liporace Branding for 2020 Olympics digital illustration (Illustrator) Kendall Mejia Spiderman Concept digital illustration (tablet, Manga Studio 5)

a larger discussion regarding the politics of their discipline. By following the course structure and required reading materials for Dr. Craig Martin's Theories of Religion, an independent study I completed during my senior year at St.
Thomas Aquinas College, I examine in depth one of the central controversies of the field of Religious Studies. I argue for the necessity of method and theory courses in a discipline which fears the reduction of its data so deeply that it attempts to render them beyond all possibility of critique. I demonstrate the necessity of critical scholarship in a discipline that often neglects to examine its own invocation of non-neutral labels by examining the very scholarship which this discipline has produced up to the present.

## Habitus in Dostoyevski

Kayla Hunter
Mentor: Craig Martin, Ph.D., Associate Professor of Religious Studies
Pierre Bourdieu's theory of habitus explains how social groups not only determine cultural aspirations and behaviors but prevent mobility between differing groups or habitus. Fyodor Dostoevsky's novel Notes from Underground depicts a man's futile attempts to assert his own free agency upon his society. Through an application of Bourdieu's theory to the novel, it is clear that the nature of habitus not only creates, but perpetuates the underground man's social dissatisfaction. The character's frantic devolution into the underground man is a direct response to the futility of attempting to attain the social goals which are created not by the individual but his society. Because of the nature of habitus the underground man is not able to achieve or even truly escape his unattainable social aspirations.

Not Justice For All: A Case Study in Race as a Factor in Prison Sentencing<br>Lauren Hernandez<br>Mentor: Barbara Yontz, MFA, Professor of Visual Communications

Memphis, Tennessee is a city synonymous with racism even after Dr. King was assassinated in the name of civil rights. Memphis still has one of the highest crime rates in the United States. Minorities remain the target of police persecution and harsh sentencing. A minority who commits a crime in Memphis can expect to be subject to unfair sentences, including solitary confinement and the death penalty. This research is designed to explore the travesties found in the Memphis judicial prison system using a case study conducted of an African American male on death row, Tyrone Chalmers. At the age of 21, he was found guilty of second-degree murder in Memphis. Chalmers was sentenced to death for a crime that would normally result in a sentence of 13-60 years. The purpose of this research is to explore the conditions that led the jury to sentence him to death.

# AZARIAN <br> MCCULLOUGH <br> ART GALLERY 

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