FOURTEENTH ANNUAL SENIOR SYMPOSIA CLASS OF 2018 2018 SYNPOSIA

THE BROTHER DAVID S. BAGINSKI FSC





THE ZUPANCIC FAMILY STEM CENTER CENTRAL CATHOLIC HIGH SCHOOL

DR. PATRIZIA COSTA FREZZA AND MR. JOHN J. ALLEN, DIRECTORS

APRIL 24-26, 2018



A Meeting of Doctors at the University of Paris. From the "Chants royaux" manuscript, Bibliothèque Nationale, Paris,16th cent. BNF, Français 1537, fol. 27v[1]

FOURTEENTH ANNUAL SENIOR SYMPOSIA



CLASS OF 2018

WELCOME

Welcome to the fourteenth annual Senior Symposia for The Brother David S. Baginski, FSC Scholars Program. This is an opportunity for students to showcase some of the interesting discoveries they made while working on their theses projects. It is also an opportunity for the Central Catholic community to experience the intellectual vitality that is created when talented students work under the direction and mentorship of dedicated faculty and in community with other researchers. This combination of discovery-based learning, faculty-student mentorship, and collegial relationships with other researchers has been transformative for everyone involved.

The breath and scope of the oral presentations featured in these symposia reflect not only a wide range of academic interests; they also speak to the caliber of the students themselves. Enterprising and thoughtful, these students have delved into a deepened knowledge within a specific field of study. They worked on multiple drafts of their theses and discussed their ideas often with their peers in a thesis writing seminar. In late February and early March, they stood before a faculty panel and advanced an ethical position or proposition through argument. These experiences have enriched their education, sharpened their skills in critical thinking and strengthened their self-confidence as scholars.

All of the theses, whether they were based in the arts, humanities, social sciences or applied sciences, stemmed from a desire to advocate for positive change in the world. Some of the students tackled pressing issues: climate change, food insecurity in America, gentrification, free speech and political correctness, American policy in Syria, injustices in the prison system, and the glorification of hedonism in popular music. Because of their noble ambitions, these symposia are very much a celebration of their fine efforts and impressive writing achievements.

We extend our sincerest thanks to the Central Catholic community for their generosity in providing a challenging and supportive learning environment. Browse through this abstract book and you will find named the many faculty members who guided this year's participants. We are most grateful for their efforts.

Enjoy the symposia!

DIRECTORS

Patrizia Costa Frezza John J. Allen

ADVISORY COUNCIL

Justin Belardi Glenn Campbell Todd Rooney Harry Sirockman











SYMPOSIA OVERVIEW

April 24, 2018 6:00 pm

Welcome and Prayer Br. Tony Baginski, FSC

Opening Remarks Patrizia Costa Frezza

Student Presentations

Reception

April 25, 6:00 pm Student Presentations

Reception

April 26, 6:00 pm *Closing Remarks John J. Allen*

Student Presentations

Awards

Reception



CONTENTS

CONGRATULATORY REMARKS	
Justin Belardi, Glenn Campbell, Todd Rooney, Harry Sirockman	1
INTRODUCTION	
Brother Tony Baginski, FSC	2
DIRECTORS PERSPECTIVES	
John J. Allen, Living in a Communitas Docta Virtutis	3
Patrizia Costa Frezza, Academic Charisma	4
ARTS	
Dan Conley, Living in the Here and Now: An Analytical Survey of the Glorification of Hedonism in Popular Music	10
Jack Wiggins, Is Your Music Haunted? How Ghost Production is Cursing the Electronic Music Industry via Malicious Intentions Rooted in Capitalistic Exploitation	11
HUMANITIES	
Josh Egan, An Analytical Evaluation of the Ethical Permissibility of the Human Psychological Necessity of Recreational Distraction	
	12
SOCIALSCIENCES Joe Ebbert, <i>The Electoral College: A Historical Analysis and Possible Solutions</i>	13
Chad Antosik, A Comprehensive Review of the Statues Governing the Actions and Response to the CIA's UAV	
Program in the Middle East and Northern Africa	14
Michael Bushnell, Assessing Environmental Policies in Urban Areas	15
Anthony DiBello, Preserving the Next Generation: Analyzing the Role of the Screen in Youth Education and	1.0
Development Amid the Screen's Ubiquity Marco DiVito, Community-Police Relations, Social Control, and Building the Potential for Collaborative Justice in	16
Communities	17
Chris Duca, Twenty-One or Lower? A Comparative Case Study Between the USA and Italy to Determine a Solution to	- 1
the Binge Drinking in America	18
Joseph Fantini, An Examination of Diet: An Individual Response to Health Care	19
Troy Fisher, The Effectiveness of Veteran Programs in America to Support Military Men and Women When They Return	• •
Home from War, Through the Catholic Social Teaching Lens	20
Gianmarco Frezza, The Inconsistent Pragmatism of American Foreign Policy. A Lesson From the Syrian Civil War Michael Gemperle, An Investigation into Ethical and Effective Migrant Laws	21 22
Michael Gempene, An Intestigation time Estimate and Effective Migram Laws Michael Halahurich, A Holistic Approach to Understanding Racial Injustices in the Prison System	23
Peter Koltas, Social Media: a Supposedly Welcoming Yet Detrimental Place	24
Lewis Richardson, The Effects of Free Speech and Political Correctness on Tertiary Education in the United States	25
Ben Shissler, Food Insecurity in America: What Are We Doing to Feed America's Hungry?	26
Warren Sipe, Facilitating Positive Business-Community Interactions to Mitigate the Impacts of Gentrification in the	
Pittsburgh Area	27
Max Steffey, An Investigation of Industrial Agriculture: Analysis and Ethical Implications	28
Peter Wagstaff, Patent Reform: A Mechanism to Reduce Overpricing and Encourage Innovation in Pharmaceuticals	29
APPLIED SCIENCES	

Luke Barrante, Tissue Engineering: A Study of Corporate and Federal Influence on the Future of Medical Development30Sam Gatti, Effective and Ethical Usage of CRIPR-CAS931

CONGRATULATORY REMARKS FROM THE ADVISORY COUNCIL

A British dictionary defines a scholar as a learned person, especially in the Humanities. We hope that your years here at Central have helped you earn this title of erudition and that you continue on the journey of learning for the rest of your life. A true scholar is a curious person and a lifelong learner.

Glenn Campbell Chair, History and Social Sciences

Congratulations on a wonderful achievement. I am truly blown away by the quality of your work and the effort that you put into this program. I hope that you take the opportunity to reflect on your successes before transitioning to the challenges that are ahead of you next year. Please also continue to challenge yourself intellectually. We need bright, thoughtful, and moral young men like you to become our future leaders.

> Justin Belardi Faculty, Science Department

While congratulations are certainly in order, be sure to see your completion of this program as the start of something lifelong. Now more than ever, the world needs disciplined and inquisitive minds. Your work in the Baginski Scholars program must lay the foundation for your life's work, whatever and wherever that may be. Be always like the son in Seamus Heaney's poem "Digging" who, upon watching his father drive his spade deep into the peat, says of himself:

"Between my finger and my thumb

The squat pen rests.

I'll dig with it."

Todd Rooney Chair, English

Learning is a lifelong experience. If we teachers and mentors at Central Catholic have succeeded, you have begun to embrace intellectual rigor and academic challenges. Your learning but commences. From Albert Einstein: "Never regard study as a duty but as an enviable opportunity to learn to know the liberating influence of beauty in the realm of the spirit for your own personal joy and to the profit of the community to which your later works belong."

Harry Sirockman Faculty, Mathematics

INTRODUCTION

Listen to counsel and receive instruction, that you may eventually become wise. (Proverbs 19:20)

It is my pleasure to welcome you to the fourteenth annual Br. David S. Baginski, FSC Scholars Program Symposium Presentation. This three-night event represents the culmination of thoughtful research and disciplined thinking by some of the best young minds at Central Catholic and in Western Pennsylvania.

I have had the pleasure to sit in on some of the oral defenses where each student presents their research and is critiqued by a three-person panel comprised of the co-directors and their reader. The word critique means "a detailed analysis and assessment", and that is exactly what happens. The panel does not say "this is right and this is wrong", but provides feedback on the clarity or their argument and rigor of their research. In essence, providing individual counsel and instruction that allows students to grow and develop. This is borne out in the oral presentations and the adroit manner in which they handle audience questions at the senior symposium.

I commend the co-directors of the Scholars Program, Dr. Patrizia Costa-Frezza and Mr. John Allen, who have carried on the tradition of the program begun by Br. Ernest Miller, FSC in 2002 and further developed by Matthew Sudnik. Having co-directors has allowed the program to further evolve and to provide deeper and more varied opportunities and perspectives that ask the scholars to wrestle with the perennial questions: What does it mean to be human? What does it mean to live a moral life?

I congratulate our scholars on their successful completion and defense of their theses. I look forward to hearing the oral presentations and taking part in the question and answer periods. To the Scholars: I hope that your participation in the Br. David S. Baginski, FSC Scholars Program is a portent of future academic achievements as you continue to grow into Men of Faith, Men of Scholarship and Men of Service.

> Live, Jesus, in our hearts. Forever! Fraternally,

Br. Tony Baginshi, FSC

Br. Tony Baginski, FSC Principal





SCHOLARSHIP DISCIPLESHIP CITIZENSHIP



DIRECTOR'S PERSPECTIVE

Academic Charisma

Scholars have been writing and defending theses for over four centuries. The practice started in Europe during the Medieval period and diffused globally in the 19th-century after considerable input and revision from Jesuit academics.

For the Medieval scholar to achieve success and fame, his thesis had to be in fashion with the times, display originality of thought and provide evidence of genius. In those early days, scholars wrote theses mostly for "applause" and "recognition". They were less concerned with the business of working through a hypothesis or an ethical problem than scholars are now or even the ancient Greeks were when they participated in Socratic symposia. The earliest theses were written primarily to demonstrate exceptional intellectual powers and to cultivate an academic charisma.

An essential activity in connection with Medieval theses was the disputation. These formalized debates were conducted in Latin and resembled the feisty jousts of courtroom proceedings. A presider (*praeses*) sat in an elevated chair called a *cathedra* and a respondent (*respondens*) took his place behind a massive table. Opponents (*opponents*), dressed in hats that symbolized their rank or nobility, fired rigorous questions as a way of testing not only the respondent's knowledge but also his morals.

The setting for disputations was not a classroom, study hall or library but the top of a tower so that participants could be removed as much as possible from the bustle of a town square (think barking dogs, galloping horses, loud market vendors and the potential uproars of belligerent citizens). The walls of the tower were painted uniformly green with no paintings on the wall, since these might distract attention. Women were barred from attending for the same reason. The viewing of trees, a garden or a meadow through an open window was, however, encouraged due to the belief that nature strengthened memory.

The Seniors in the Baginski Scholars Program participated in disputations of their own this past February but with none of the antics and pressures of their Medieval forbearers. Ours were called "defenses" and no one was required to speak in Latin. We did not roast a single student on a spit although, on occasion, we warmed them gently so as to encourage them to elaborate on what they knew. The conversation was rigorous but not in any way stressful. Students were afforded the opportunity to display their bravado in an informal and chivalrous fashion more in keeping with the kind of exchanges they are already used to in their humanities seminars.

Is this the extent of what constitutes academic charisma at Central? No, not at all. Our practice is not simply a relaxed version of an an age-old practice. And more than charisma, we focus on *charism*. This charism is deeply rooted in a Lasallian tradition of faith and responsibility toward others. It also stands on three pillars (delineated by Brother Ernest, the first director of our program): citizenship, scholarship and discipleship. Our academic charism, therefore, has an outward orientation. Our Seniors write theses not as an exercise in intellectual prowess, but for all of the following reasons: to engage with a scholarly community (through research); to discern and evaluate material with a desire for truth and an appreciation for reason; to contribute a "good" of their own to a community or a society that needs it.

Their discipleship is not a simple act of devotion toward the scholars that came before them or even their faculty mentors. It focuses, instead, on the communities they wish to help through their work. All Baginski Scholars understand that they cannot ask the readers of their theses to change their views about something unless they are willing to take responsibility for those changes themselves. They write, defend and present knowing that they have a duty of care around the differences they wish to see in the world. This is a very noble and worthwhile form of discipleship.

The thesis writing process at Central Catholic, is a profoundly social activity. Our Scholars are not left to work in a vacuum. They are very much connected to the peers they consult regularly for feedback, the mentors they engage with, the outside experts they seek and the communities to whom they present and invite to pose questions. These opportunities are not simply handed to them. They are cultivated and formed by them. They enjoy a great deal of freedom in managing all of their interactions. All this extra effort pays off: by embracing their community with shared understanding and interest, our Scholars have set higher ethical standards than they could have set for themselves alone.

We are so proud of the work that our Scholars have done this year. Communitas docta virtutis!

Patrinjia Costa, Frezza

Patrizia Costa Frezza, PhD Director, The Brother David S. Baginski, FSC Scholars Program

DIRECTOR'S PERSPECTIVE

Living in the Communitas Docta Virtutis

As disparate human beings, we often struggle to connect with each other on a personal level. Sharing intimate knowledge and emotions with friends or family can leave one feeling vulnerable, or even open to exploitation, manipulation, and ridicule. Information we share with others can be weaponized against us. We all know this. Who among us has not been the clumsy one, the weird one, the one who was different? High school can often bring into relief the worst aspects of our human nature and can highlight the frustration of never being able to truly share with another person our innermost being.

This reality, caused by our fallen and broken humanity, is projected onto the broader scope of society. What was once a playground scuffle, soon becomes racial discrimination or war without end. We tend, then, to put up our guard, to recede from productive and healthy communities in fear for our lives. The large-scale society presses down upon us and so we spend most of our days lost in numbing anonymi-ty. Even those we think we know and understand, we fail to truly know. We may long for communion, but we struggle to break down barriers between us, barriers we build ourselves. This has been the great tragedy of human history.

But "hope springs eternal," and especially among young scholars. Through your industrious endeavors, evidenced at this symposium, I see the grace and blessings of a future age. Your involvement in this program has been, and always should be, grounded in a genuine love of learning and a desire to bring good into this world. Most importantly, you have made a commitment to each other in bonds of friendship, embodying the true spirit of the program's motto: *communitas docta virtutis* (scholarly community of virtue).

The "idea" of a symposium, is not unlike Blessed John Henry Newman's idea of a university: we learn best in community with others, together on a common quest, seeking a common truth. Likewise, the great revelation of Plato's dialogue, *The Symposium*, is mediated to Socrates by Diotima, explaining that "true Love is a desire for perpetual possession of the Good and the Beautiful." In the end, Love, Passion, Beauty, all have a role to play in the search for Truth.

Your passion for and responsibility to the Central Catholic family and the friends you have forged in this program is one way of breaking down the barriers of the modern world. I never tire of witnessing the close bonds you have formed with each other over the years, through directors, faculty, and most especially, each other. You have shared personal stories, competed together on teams and in extracurricular activities, traveled together, mourned together, prayed together, and contemplated the great questions of life, its meaning and purpose.

Many of you, no doubt, have come to form something akin to a Quadriga. In Latin, this means "Four Yokes." It refers to four horses that were used to pull a chariot in Roman times but can also refer to friend groups. I first heard this term when I was in college, dialoguing late into the night with professors and friends, discussing the meaning of existence. One can belong to many Quadrigae, but the concept is always the same: in the race of life, together, friends help to drive the chariot toward a common destination. All must pull equally, otherwise the chariot will careen off course. If one horse is slower, the others must adjust together to its needs. These bonds of fellowship and love, whether between four friends or many, are sacrosanct.

For all of us who are seekers, the road to truth and goodness is found through communion with others, through love of someone else, and through friendship—it is found in a *communitas*. The greatest example I experienced with this class was on the Wheeling service trip, when, amidst the onslaught of rain, cold, and mud, you banded together in joy to accomplish a task of service for a community in need. In that moment, you exemplified a true spirit that seeks truth in fellowship among friends and continues to animate this program. Such *communitas* is at the heart of the Catholic principle of solidarity—the impulse to embrace the reality that we are all brothers and sisters to each other, together on the same quest—if one person is hurt, we are all affected.

By the work presented this week, and the legacy you share together in this program, you have solidified your bond to each other, sharing something transcendent, and have exported that spirit of community beyond these walls, into the heart of the world. I offer prayers for you along your passage, and assurance that the "yoke" of friendship is easy, and the burden is light, as long as we are forever journeying to a common destination.

John J. Allen

John J. Allen, M.A. Director, The Brother David S. Baginski, FSC Scholars Program









ARTS

Living in the Here and Now: An Analytical Survey of the Glorification of Hedonism in Popular Music

Daniel Conley — Music

By publishing the Rubáiyát of Omar Khavyám, a 400 line poem based on rough translations of the 12th century Persian poet Omar Khavyám, English writer Edward FitzGerald introduced the ideology of hedonism to Victorian England; this was a radical ethical theory that soon took Europe by storm during an era characterized by moderation and primness. This culture of hedonism has had a profound effect on the production of music, which is seen especially in mainstream genres throughout the past century. Artists like Stuff Smith, Fats Waller, the Beatles, and Grateful Dead became figureheads of the countercultures of their respective eras. They used their position as a way to broadcast and advocate for the pursuit of lifestyles characterized by pleasure-seeking. My research focuses on why the trend of glorifying hedonism in popular music has continued for nearly a century, why audiences have consistently bought into the trend, and addressing the issues that have arisen in the twenty-first century as a result of the glorification of hedonism. The paper asserts that in the jazz age, the glorification of hedonism was intended to cultivate a (counter) cultural identity and subsequently, to humorously protest federal criminalization of cannabis. In the psychedelic era, artists seeking to improve society delivered hedonistic messages encouraging self-reform as a means of societal reform, which appealed to audiences also seeking the improvement of society. In the modern age, however, the glorification of hedonism continues through commercial trajectories, creating a blend between art and commercialism in which many headlining artists have sidestepped craftsmanship and the substance of songwriting so as to garner immense commercial success by tastelessly glorifying hedonistic lifestyles.

Reader: Joseph Wilson, Chair, Performing Arts

ARTS

Is Your Music Haunted? How Ghost Production is Cursing the Electronic Music Industry via Malicious Intentions Rooted in Capitalistic Exploitation

Jack Wiggins - Music / Cultural Studies

It's no secret that popular musicians often employ outside help to bring their ideas to fruition — Ed Sheeran's "Shape of You" took four additional songwriters and a producer to yield the 2017 mega-hit. Even if there's a chance that Ed didn't produce the instrumental or write the lyrics, at the least, he still had to perform the vocal. But what if he wasn't in the studio at all when the song was recorded? This dilemma is precisely what plagues the electronic music industry through the controversial trade of ghost production — wherein a professional music producer is commissioned to create a track for another "artist" (purchaser) to distribute as if it were the work of the purchaser. The ghost remains anonymous and waives his or her right to credit in exchange for a sizable monetary agreement. This study aims to examine the relationship between the engaged parties and the community of listeners at large, who the perpetrators will take every measure to hide their deceptive practices from. Through reading extensively into leaked source material, as well as speaking with recognized industry professionals, including the most influential voice from the community on this issue, and two managers at one of the biggest dance music labels in the world, I am able to illustrate the negative impact that this practice has on fans, young and upcoming talent, and, most directly, the true, honest artists. As dance music continues to expand its influence over the global music scene, I can conclude that the termination of this practice is essential to the survival and legitimacy of this industry as the lens of the public microscope increasingly magnifies the capitalist-driven dishonesty at play.

Reader: Phil Bohn, Faculty, Music

HUMANITIES

An Analytical Evaluation of the Ethical Permissibility of the Human Psychological Necessity of Recreational Distraction

Joshua J. Egan — Cultural Anthropology / Ethics

Mankind has consistently demonstrated a necessity of constant entertainment and pleasure. At first glance, such a phenomenon seems like an oversimplification of an extremely complex mechanism of the workings of the world as we know it. But, if one were to approach the issue holistically in terms of day-to-day habits and occurrences, one may start to arrive at a similar conclusion: collectively, mankind illustrates this idea through a multitude of doings, whether it be through binge-watching television, over-utilizing cell phones, abusing video games, engaging in addictive drug use, participating in gluttonous eating disorders, or etc. Thus, in light of this recognition of behavior, the essential purpose of this paper is to address the fact that many simply accept this aspect of daily lifestyle as a natural instrument of our workings and functionality. Despite this seemingly simple concession, there is yet to be discovered any remnant of concrete or valid reasoning indicating this behavior is indicative of our fundamental human nature. Furthermore, because of this reasoning and the socially-imposed mindset of embracing this addictive characteristic of humanity, many are suffering across the globe specifically due to complications resulting from such recreational distractions. Considering shifting trends and the advancement of technology, humanity's doings have naturally established a chronological timeline of these habits. For purposes of the argument, historical drug utilization, Victorian sport, and modern gaming/virtual reality were addressed so as to highlight these transitioning objects of desire. Complementing this time-oriented structure, there have been numerous societal/external factors that propagate these continued recreational practices, including surplus, emptiness, and consumerism. Though the effects may be as detrimental as the creation of addictive obsessions, there is a certain healthy aspect of "re-creating" the self after labor, as evidenced by the etymology of the word 'recreation'. Thus, Maslow's theory of self-actualization and C.S. Lewis's noteworthy, communal aspect of Catholic morality may aid as a framework for evaluating the distinction between restoration and deterioration of the self and the community

Reader: Todd Rooney, Department Chair, English and John Allen, Director

The Electoral College: A Historical Analysis and Possible Solutions

Joseph J. Ebbert — History / Law

Following the most recent United States presidential election in 2016, several questions have been raised regarding the legitimacy of and the accuracy granted by the Electoral College as it stands. In this thesis, it was my goal to study the history of the electoral college and attempt to understand why it has remained essentially unchanged for over two centuries. This understanding required me to research the background of the electoral process as it was written in the original constitution, as well as why it was amended following the presidential election of 1800. And, since the process has gone unchanged since that Twelfth Amendment to the United States Constitution, I researched several notable attempts to reform or abolish the electoral college, as well as why they did not pass. I also studied several notable presidential elections, namely the elections of 1824 and 2000, along with the most recent election, to examine the differences that the electoral college makes in determining who is elected and who is not. Lastly, I studied and evaluated several popular alternatives to the electoral college, some of which gained steam in Congress in the past but were not quite able to achieve the status of constitutional amendments. In conclusion of my evaluation, I offer a unique solution to the issue. In line with several amendment attempts, I suggest that two electoral votes should be awarded to the winner of the popular vote of each respective state. For the remaining votes, one vote should be awarded to the winner of each individual congressional district, with the District of Columbia remaining at winner-take-all status. Furthermore, I call for a second clause to the amendment which would abolish gerrymandering in the several states, so as to create the most fair election outcome imaginable.

Reader: Glenn Campbell, Chair, History

A Comprehensive Review of the Statues Governing the Actions and Response to the CIA's UAV Program in the Middle East and Northern Africa

Chad Antosik — Strategic Finance / International Relations

Unmanned aerial vehicles have provided a crucial advantage in the dawn of unconventional warfare for the United States. The civilian inhabitants of certain regions have been significantly impacted by this technology but have yet to receive accommodation. This study is an investigation into why the current United States Foreign Claims Act does not apply to UAV strikes, but if it would, how the CIA could build a stronger network of assets in the Middle East. My research revolves around certain CIA extrajudicial UAV strikes and their impact on civilian populations, which has been critically linked to anti-American sentiment in the region. These effects include physical, psychological, and mental trauma that can lead to a quicker devolution of social progress within already shattered communities. The intention of this project is to show that through direct financial aid, preferably through an updated Foreign Claims Act, the U.S. could alter the disconnect between allied forces in the region and its inhabitants. Although the nature of UAV operations should already be included under the Act, multiple amendments are proposed to reflect the evolving relationship between the DoD and the CIA and to explicitly state the situation regarding UAVs. The proposed plan would seek to continually lower civilian casualties incurred by U.S. weaponized air strikes instead of instating another stagnant aid program. By the CIA being held accountable to the civilian victims post strike, the hope is that these inhabitants would be more likely to share credible intelligence in the future and thus limit further casualties. The achieved solution is the product of progressive United States diplomacy and pressure due to the state of international attitudes towards UAV warfare.

Reader: Justin Morgan, Faculty, English

Assessing Environmental Policies in Urban Areas

Michael J. Bushnell — Public Policy / Urban Studies

Given the federal government's shifting stance on climate change, the United States' commitment to the Paris climate accord has fallen into jeopardy. Upon this realization, cities across the country promised to uphold their emissions obligations, presenting a crucial challenge for these cities in coming years. This study examines what it will take to meet these goals by investigating the intersectionality between policymaking and the environment. Despite the leadership of some cities, others are quickly falling behind and risk offsetting the progress being made by their more sustainable peers. Vis-à-vis an analysis of status quo urban policies in cities with varying degrees of sustainability (New York, Pittsburgh, and Phoenix), I found that current solutions to sustainability concerns are often addressed by "bandage" solutions that mask the high level of commitment necessary to form permanent environmental response. Consequently, I argue that cities must inspire spaces for micropolitical change, such as increased environmental education in secondary education, and construct a stronger macropolitical push to incentivize cost-effective sustainability practices that would reduce emissions to the extent prescribed in the Paris Agreement. The end goal of the thesis is to produce a working model of recommendations that could be implemented in any city to create an ideal and sustainable urban setting.

Reader: Br. Kevin Dalmasse, Faculty, History

Preserving the Next Generation: Analyzing the Role of the Screen in Youth Education and Development Amid the Screen's Ubiquity

Anthony DiBello — Public Health / Psychology

The twentieth and early twenty-first centuries have seen technology become an increasingly integral part of the lives of people of all ages. Within the last two decades, the rise of smart technology has fundamentally changed the manner in which modern youth live; whether for the sake of education, entertainment, or staying connected with other people, children are now equipped with the technology to do more than they had ever previously been able. Over the past few decades, the statistics regarding youth exposure to smart technology and devices with screens is alarming. On average, American children are spending more than six hours per day engaged with some form of electronic media. While not inherently negative, such exposure can prevent children from developing the wholesome ability to engage with and understand other people and having the healthy lifestyle which they deserve. Through evaluating research articles, publications, and experiments related to overexposure to today's technology, my argument is that young children deserve more than to simply have a smart device presented to them as their primary form of entertainment and/or education during their formative years. While children should not be prevented from the opportunities for development which such technology provides, their exposure to the proper technology should be given considerable boundaries. In order to shift the family dynamic with modern technology, it is equally important that parents and caretakers take on the challenge of making the effort to devote significant amounts of screen-free time to children so that they do not feel that they have to compete with their parents' attention. Given the domination of technology in the modern world and its detailed list of effects on people, parents owe it to their children to start them off right in terms of establishing an appropriate relationship with the ever-evolving technology that will most likely be with them throughout their lives.

Reader: Justin Morgan, Faculty, English

Community-Police Relations, Social Control, and Building the Potential for Collaborative Justice in Communities

Marco A. DiVito — Political Science

With videos of police killings of unarmed civilians making the news regularly and a criminal justice system that boasts a higher incarceration rate than any country in the world, it is clear that the American response to crime leaves much to be desired. This thesis attempts to make sense of the issue at the level of the community by understanding the role that relationships between police departments and the communities they police play in effective crime prevention strategies. It examines different factors that influence civilian perceptions of the police within the context of current policing trends, and then discusses the implications of feelings of police legitimacy on community responses to crime. Finally, it seeks to contextualize and apply these findings through an account of a ride-along and subsequent interviews of police officers performed by the author. The goal of this thesis is to understand how improving trust, accountability, and cooperation between police departments and members of the community can lead to decreases in crime without destroying communal bonds; thus, it seeks to provide initial suggestions for a model of collaborative justice that implicates officer and neighbor alike in a project of crime prevention and community improvement.

Reader: Br. Kevin Dalmasse, Faculty, History

Twenty-One or Lower? A Comparative Case Study Between the USA and Italy to Determine a Solution to the Binge Drinking in America

Chris Duca — Public Health

When examining the cultures of Italy and the United States there are some glaring differences, especially when dealing with the field of alcohol consumption. The main difference, which has sparked conversation over the past few decades, is the gap between minimum legal drinking ages between the US and Italy. The keystone point of this discussion has been questioning the success of a lower minimum legal drinking age. What this thesis will focus on is examining the unsuccessful binge drinking culture among the youth in America to determine if lowering the drinking age will remedy the issue. A comparison between the youth drinking culture in Italy with the United States will shed further light on the issue. What research has produced is that a successful youth drinking culture is not based on solely legality, rather the issue being more culturally based. A successful youth drinking environment in Italy can be attributed to its own subjective culture, which is much different from that of the US. With regards to the United States, it would benefit from a lower MLDA given some major cultural shifts in American society. The American culture shall be more deeply examined to determine the problems and help find a possible solution. Meanwhile, the Italian drinking culture will be used as a model to compare alongside the culture in America. Commentary on what an existing, and successful drinking culture will be interpreted along with the benefits that come with it. The main purpose of this thesis is to exploit the youth drinking culture present in American society, and through American cultural examination, and comparisons to the Italian youth drinking culture, a plausible solution can be achieved. Research has shown that a lower MLDA is successful as long as there is a solid culture to support it, and the US would benefit from a lower MLDA given some cultural changes are initiated.

Reader: Kurt Retenauer, Faculty, English

An Examination of Diet: An Individual Response to Health Care

Joseph Fantini — Health Sciences / Public Policy

America is currently in the middle of a healthcare epidemic. Despite spending nearly three times as much as other highly developed countries per individual on healthcare, millions of Americans are left with little to no coverage. During a time where the government has essentially failed millions, the most practical solution to health in America has become an individual one. With all things considered, adopting a plant-based diet may prove to be the best way to not only treat but prevent some of America's most deadly diseases better than ex post facto medical treatments.

Reader: Br. Kevin Dalmasse, Faculty, History

The Effectiveness of Veteran Programs in America to Support Military Men and Women When They Return Home from War, Through the Catholic Social Teaching Lens

Troy Fisher — Government Affairs/ Public Policy

This study aims to illustrate the quality and availability of care given by the United States Veterans Association (VA) in the ways of physical care, educational care, and homelessness. This study is motivated by three goals: first the investigation into the disease of PTSD and the Veterans Affairs office to show the quality of care that is administered. Next, the multiple avenues that are available to reintegrate veterans into the workplace with the struggles that follow. And finally, the trending issue of homeless veterans that is sweeping across America. The common tie of these three issues is Catholic Social teaching. The teaching provides a lens to which one can interpret the solutions and understand the necessity for the changes. Using various sources, namely the statistical analysis companies such as the RAND Corporation, the Veterans Affairs Pittsburgh Public Affairs Office given statistics, and numerous documents from the U.S Department of Labor, all support the goals of the thesis. Furthermore, the sources help scaffold the assertions made in the paper, especially the information gathered from the field expert. The findings from the research help to advance possible solutions to the identified problems as well as continuing the conversation on topics that may not have a definite answer/solution. The implications presented are not only important on a local scale, but also help bolter awareness to the new chapter of veteran care that the United States is entering as service men and women continue to return home from the Middle East.

Reader: Jarrod Kinkley, Faculty, Campus Ministry

The Inconsistent Pragmatism of American Foreign Policy. A Lesson From the Syrian Civil War

Gianmarco Frezza — History / International Relations

An important function of the U.S. government is to conduct relations with all sovereign countries in the world. US foreign policy promotes our national interests, preserves our security and contributes to the well-being of the world. At times, however, our policies seem inconsistent and hypocritical. After the Second World War, different approaches were taken for different conflicts. This thesis examines what appear to be inconsistencies with our policy in Syria. Different philosophies of foreign policy that have guided US action through history will be reviewed in connection with Syria, including Washington's warning against foreign entanglements, the Monroe Doctrine, the Roosevelt Corollary, the Atlantic Charter and the Truman Doctrine. Each of these philosophies has been regarded as an appropriate reaction to contemporary economical and political circumstances. Despite their effectiveness, they are also inconsistent. Noting that US foreign policy has a trend of adaptation, this thesis then tries to answer the question of why US policy in Syria has not been consistent. Attention is drawn to the fact that the US has a limited capacity to deal with foreign issues, and thus cannot enact a perfect solution to every foreign problem. It is then shown that what appear to be inconsistencies in policy are actually the result of a pragmatic approach to the conflict in question. Based on these insights, we can attempt to understand why the US chose to base its Syrian policy around limited support of insurgents as opposed to sending its military to intervene.

Reader: William Lloyd, Department Chair, History

An Investigation into Ethical and Effective

Migrant Law

Michael J. Gemperle — Government Affairs / Public Policy

This thesis is motivated by the question: can an ethical and effective system of dealing with illegal immigration into the United States be determined by examining the Democrat and Republican 2016 Presidential Platforms? Illegal immigration is extremely topical in the current political climate and as such needs to be addressed from several different points of view in order to determine what the overall best policy may be. Because any substantial amount of legislative progress can be stagnated by partisan politics, a new direction of examining possible solutions to current illegal immigration is called for. This thesis proposes examining both mainstream American political party's immigration policy through the lens of the Catholic Social Teaching on Immigration and the Movement of Peoples. It will explain historical federal laws concerning regulating immigration from particular regions as well as the causal factors for this form of migration to begin. The findings of the research draw from aspects of both political party's stances on illegal immigration, synthesizing them in accordance to the Catholic Social Teaching on Immigration and the Movement of Peoples into a form of the system referred to as skill-selective immigration, breaking potential immigrants into categories dependent on a set of federally-established criteria before ultimately making the decision of allowing entry or not. I concluded that a skill-selective immigration policy which followed those guidelines was that in most accordance with the Catholic Social Teaching on Immigration and the Movement of Peoples and thus was simultaneously ethical and effective.

Reader: Jarrod Kinkley, Faculty, Campus Ministry

A Holistic Approach to Understanding Racial Injustices in the Prison System

Michael Halahurich — History / Public Policy

My thesis examines the racial problems present in America's prison system. I found that, through the very structuring of the prison system in America, the War on Drugs, the passing of racially-biased legislation, and something called "the mythology of black criminality," the American prison system was set up over the last hundred years to specifically target African Americans. This structuring was aided by societal institutions like our schools and our police forces, which help to unjustly push black people into prisons at unnaturally high rates. The way in which society has been conditioned to view black people plays into this myth that I reference above and contributes to the overrepresentation of black people in prisons. Once arrested, African Americans, along with all of the other prisoners, are forced into menial, low-paying prison labor that reeks of exploitative capitalism. Finally, once they have been released from prison, black people find themselves in difficult situations and nearly relegated to second-class citizenry by felony disenfranchisement laws and the drastic increase in the difficulty of finding a job that comes with being a black person that has been labelled a "criminal". The system our nation currently finds itself in then has been carefully orchestrated to act oppressively towards black people.

Reader: Todd Rooney, Department Chair, English

Social Media: a Supposedly Welcoming Yet Detrimental Place

Peter Koltas — Public Health / Psychology

Social media is a modern phenomenon and numbers of users nationally and worldwide and greatly increasing every year. People use various social media apps for a variety of different reasons with varying degrees of perception of how impactful social media is on their lives. Social media can lead to many negative effects on users including addiction, depression, sleep loss, worrying about body image, and the fear of missing out. All of these negative side effects were not intended when the websites were made, but their existence has not been dealt with by the creators of these websites. Some changes will be proposed such as the elimination of many of the numbers involved social media and the removal of likes. These changes, if implemented, could be very helpful for many of the users and would likely make social media much less addictive.

Reader: Todd Rooney, Department Chair, English and John Allen, Director

The Effects of Free Speech and Political Correctness on Tertiary Education in the United States

Lewis Richardson - Political Science / Sociology / Philosophy

As of late, college campuses across the United States have all faced a similar dilemma. Protect the speech of provocative, often brash, and insensitive political commentators and speakers, or refuse them a stage in the name of social justice. The crusade against political correctness which seems all too common in the modern American political zeitgeist is certainly a symptom of ideological polarization, though is it a good one? This thesis analyzes the history and implementation of free-speech as it relates to the United States of America. Rather than take a solely legal approach towards investigating the justifications behind the American doctrine of free speech, the philosophical underpinnings of the idea are juxtaposed with the First Amendment as well as a variety of landmark Supreme Court Cases. This seeks to establish a framework of legitimacy for analyzing the efficacy of free speech in American society. In order to introduce the nature of speech as it relates to the university, the very foundation of tertiary education is examined utilizing teleological standards. Following this, the hot-button topic of political correctness is discussed in depth. Through an examination of the nature political correctness as well an analysis of the history and evolution of this standard from its conception to the modern day, an explicit line is drawn which defines the pragmatic applications of the often ridiculed phenomenon. As political correctness is an incredibly broad and complex topic, the analysis done within this thesis specifically confines the discussion to issues as they relate to higher education. Following this, an investigation into contemporary, high-visibility case studies related to free speech and political correctness are explored utilizing a standard for acceptable dialogue and implementation established in the thesis' final chapter.

Reader: Justin O'Connor, Faculty, English

Food Insecurity in America: What Are We Doing to Feed America's Hungry?

Benjamin C. Shissler — History / Public Policy

This thesis originally began with the intention of exploring the soup kitchen model for feeding America's hungry, which came about from personal experience on a service trip to Wheeling, WV. Over the course of my research, the project developed into a look at America's hunger problem as a whole and the response of the country to this epidemic. Using the concept of food insecurity, I am able to explain the American hunger epidemic in more quantifiable terms. By analyzing existing models of food service to the hungry, including their history, modern applications, strengths, and drawbacks, I aim to explain the measures that are currently being taken against American hunger. Describing certain areas in the country with high levels of food insecurity, or food deserts, provides a better understanding of the problem. By combining the strengths of each existing attempt to alleviate the hunger problem, I aim to propose a more effective model than the ones in place today.

Reader: Glenn Campbell, Department Chair, History

Facilitating Positive Business-Community Interactions to Mitigate the Impacts of Gentrification in the Pittsburgh Area

Warren P. Sipe — Public Policy / Urban Planning

This thesis investigates the progression of gentrification and its impacts in the East Liberty neighborhood of Pittsburgh. It begins by outlining theoretical models for understanding gentrification, in order to provide a framework through which to view the phenomenon. Neoliberalism shapes and propels the impacts of gentrification, and advances the shaping of neighborhoods into commodified technopoles. This theoretical framework and analysis of the general impacts of gentrification is deployed to analyze various common methods for combatting community destruction and displacement, and to find issues in these existing solutions that need to be rectified. The thesis isolates that, although businesses contribute significantly to urban gentrification, they are relatively unaccountable for its impacts. An analysis of changes in the neighborhood of East Liberty, specifically oriented around the Bakery Square development, provides support for this argument and allows for consideration of the practical implementation and ramifications of Community Benefits Agreements (CBAs) as a framework for change in gentrification. Negotiated between communities, governments, and businesses, CBAs provide a platform for communities to make demands on businesses that wish to develop. The thesis concludes with methods through which businesses can be induced to sign these CBAs, and by advancing a vision for how these agreements should be constructed for the future benefit of East Liberty and of the city as a whole.

Reader: Justin O'Connor, Faculty, English

SOCIAL SCIENCES

An Investigation of Industrial Agriculture: Analysis and Ethical Implications

Max Steffey — Public Health / Agriculture

With the dawn of a new century, factory farming practices are still on the rise, growing ever-more-prominent all around the globe. Advances in technology and medicine have spurred human populations in many countries to expand rapidly, and society has needed a way to compensate for all of the mouths to feed. Thus, many developed countries have turned to industrial methods of farming where giant, mechanical factories are the forefront of food production. Animals have become commodities, and agriculture is oriented around the efficient growth of cows, pigs, and chickens. Plenty of families have access to cheap meat, which leaves less people hungry. The reduction of hunger rates has been positive and beneficial progress; however, many of the negative downsides of industrial agriculture have often been overlooked and underestimated. In the field of agriculture, the animal's health is frequently sacrificed in order to make the product as commercially desirable as possible. Patrons of meat are often ignorant of the health effects caused by consuming processed, cheap, inorganic meat, but there is an evident cultural stimulus to buy meat regardless. Furthermore, in recent years, the environment has been a unanimous area of importance, and industrial agriculture is the crux of many environmental issues. This thesis is meant to compare the advantages and disadvantages of industrial agriculture, draw conclusions based on the comparisons, and investigate a potential solution that cultivates clean, sustainable farming. Industrial agriculture poses issues that need to be addressed.

Reader: Bryan Hanrahan, Faculty, Foreign Languages

SOCIAL SCIENCES

Patent Reform: A Mechanism to Reduce Overpricing and Encourage Innovation in Pharmaceuticals

Peter Wagstaff — Public Health / Law

Over pricing in the pharmaceutical industry has long been a contributor to the rising cost of healthcare. Anti-competitive measures contribute to this overpricing and reduce innovation. While patents are a necessary tool to incentivize innovation, they have also contributed to these problems. Patents have been used as a weapon against competition, blocking generics from entering the market, even after their original protection has expired. Therefore, patent reform offers a promising method to reduce overpricing and spur innovation. By clarifying and redefining the term of a drugs protection and eliminating opportunities to extend protections, drug companies will be incentivized to focus on developing new drugs rather than protecting their existing products. This should be done by setting the protection to fifteen years after the drugs hits the market, plus the time of development with now opportunity for extensions. Furthermore, a system I have designed in which patents for more profitable and overpriced drugs are required to be licensed to multiple competitors through a bidding process would increase competition and reduce the need for copy-cat drugs while maintaining the profitability of R&D. All this will contribute to a less expensive and better product for the consumer.

Reader: Justin Belardi, Faculty, Science

APPLIED SCIENCES

Tissue Engineering: A Study of Corporate and Federal Influence on the Future of Medical Development

Luke J. Barrante — Biomedical Engineering / Public Health

As the face of future medical technology, tissue engineering poses a profound shift in the approach to medicine. In just decades, human tissues will be grown, replacing organ transplants. We will define our own evolution, dramatically improving the human life expectancy and quality of life. However, the current state of medical research and development funding does not appear welcome to radical medical technologies. Large pharmaceutical companies seem narrow-minded, focusing millions of dollars and a decade of research on a single pill. They are adept at marketing their medications to consumers and doctors, often using sales representatives to pressure physicians into over-prescribing or even wrongly prescribing medications. Every year, these companies spend billions on marketing and malpractice lawsuits. While public research universities and the National Institutes of Health offer the means for research that is both ethical and revolutionary, private pharmaceutical research funds dwarf public medicine by a factor of six. Due to the decreased funds, federally-funded research is inevitably slower and more bureaucratic than private research, which is incentivized to conduct testing and development as quickly as possible. Furthermore, both types of research are guilty of denying minority groups equal access to experimental clinical trials. By examining the current problems with biomedical and pharmaceutical research, I make recommendations for the future of tissue engineering research. I propose a coalition of research universities, governed by the National Institutes of Health, with the primary goal of sharing research findings on tissue engineering. All private biomedical companies wishing to develop a tissue engineering therapy will necessarily hire the coalition to conduct research and clinical testing. Meanwhile, the National Institutes of Health will financially incentivize large pharmaceutical companies to invest in regenerative medicine. With these recommendations, I believe that tissue engineering can develop without corruption, misinformation, or bureaucratic red tape.

Reader: Justin Belardi and Mark Krotec Faculty, Science

APPLIED SCIENCES

Effective and Ethical Usage of CRISPR-CAS9

Samuel Gatti - Medical Technology / Genetics

From cystic fibrosis to congenital heart defects, there are a plethora of genetic diseases that plague humanity in modern times. Millions of people die each year from these diseases, and yet there is no definite cure for these genetic issues. That is until Chinese scientists discovered a potential universal cure in 2013. They examined immune systems in bacteria and learned of a specific enzyme complex, later dubbed CRISPR-Cas9, which has the ability to splice precise portions of genetic code. By 2015, those researchers in China released an article on human embryo editing titled, "Protein and Cell" outlining their findings. This technology now has the potential to eradicate serious diseases of humanity, and all that stands in the way of this cure is time and resources. Although the future seems promising, with the dawn of an experimental technology comes a host of ethical and scientific concerns. From genetic discrimination to off-target mutations to the ethical concerns associated with the potential for superhuman children, CRISPR-Cas9 has a multitude of drawbacks as well. This paper serves to organize and quantify the benefits and concerns regarding this new technology, and propose potential ways employ this technology in a safe and ethical manner.

Reader: Justin Belardi, Faculty, Science

A LEGACY OF IDEAS

Let not the music of the age determine the lifestyle of the audience. —Dan Conley

Music becomes a less-valuable expression of oneself when it is regarded as a commodity. —Jack Wiggins

If you understand this framework for morally permissible recreation, you will be adequately prepared to face any decision pertaining to engagement with daily distractions. —Joshua Egan

Fair voting is the backbone of democracy; without it, we face the grips of tyrannical kleptocracy. —Joseph Ebbert

The potential reach of war reparations goes beyond the select few that receive direct payment. —Chad Antosik

If we continue to put climate change on the backburner, it will boil over and burn us all. —Michael Bushnell

Technology doesn't have to diminish our humanity. —Anthony DiBello

Policing is a team sport; it is time for the community to get in the game. -- Marco DiVito

A culture of indulgence and prohibition breeds a culture of abuse. —Chris Duca

Preventive healthcare through a plant-based diet offers a health-solution to the millions of Americans the government has failed. —Joseph Fantini

We must protect the veterans that have protected us. -Troy Fisher

The war on Syria has revealed that American foreign policy is about trying to find ideal solutions to unideal circumstances. —Gianmarco Frezza

A LEGACY OF IDEAS

Simply changing the way we view immigration can break the political deadlock. —Michael Gemperle

Slavery has never gone away; it has, instead, adapted to thrive within the American prison system. —Michael Halahurich

Social media is a public health crisis that needs to be altered in order to positively impact future generations. —Peter Koltas

When we stop letting everyone talk, no one can. -Lewis Richardson

By fostering a sense of "home" in our soup kitchens we can make great strides in solving the problem of food insecurity in America. — Ben Shissler

Community advocacy and identity are surprisingly effective tools for changing the way in which corporate entities engage in urban spaces. —Warren Sipe

Industrial agriculture is a process that presents illusory benefits and detrimental effects. —Max Steffey

We can work with pharmaceutical companies to reduce the problem of overpricing and encourage innovation. —Peter Wagstaff

Life-changing medicine will be a reality once public research and private industry learn to work with each other. —Luke Barrante

CRISPR-Cas9 can be an agent of creation rather than destruction. —Samuel Gatti

MISSION STATEMENT

The mission of The Brother David S. Baginski, FSC Scholars Program is to foster intellectual, cultural and ethical growth essential to leadership in the service of humanity. Participation in this program provides Scholars with foundations and opportunities in: intellectual curiosity, civic engagement, balance, diversity of perspectives, leadership, creativity, innovation, experiential learning, applied learning, integrity, effective communication, building community. A deeper goal of the Baginski Program is to motivate Scholars to reach beyond their individual niches and to understand that they can effect justice in society and, in fact, have a responsibility to do so.

PROGRAM DESCRIPTION

The Brother David S. Baginski, FSC Scholars Program was created in 2002 by Brother Richard Grzeskiewicz in honor of the beloved teacher and Vice Principal for whom the program is named. Embodied by three related concepts —scholarship, citizenship and discipleship, it offers an engaging intellectual forum to highly motivated students. These students become part of a community of peers and faculty advisors and meet regularly through seminars, mentoring, programmatic retreats/trips, and symposia.

Students in the program prepare for advanced studies at the university level through a liberal arts curriculum that is interdisciplinary and multi-faceted. They will explore the humanities and understand their intersection with science and technology through issue-oriented investigations. They will grapple with such critical questions as "What shapes our knowledge?", "What makes good science?", "How does one live a just and happy life?", and "What does it mean to be Human?"

Students are expected to enroll in Honor or AP sections of academic courses starting in the year prior to applying to the program. Once in the program, they will practice all of the following: analytical and critical thinking skills, advanced research techniques, writing acuity, and effective verbal communication. The Junior Humanities Seminar will engage the students in critical inquiry, social justice perspectives and community-focused service projects rooted in the Lasallian tradition. In their Senior year, students will use the skills they have acquired to develop, defend and present an original research thesis.

At its core, the program is designed to encourage students to understand the intrinsic connections between their intellectual development and their responsibilities as global citizens. Many of the enrichment activities offered by the program are fueled by this intent.



The Brother David S. Baginski, FSC Scholars Program

Central Catholic High School 4720 Fifth Avenue Pittsburgh, Pennsylvania 15213 412.208.3400

www.centralcatholichs.com