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# Promoting Interdisciplinarity: Its Purpose and Practice in Arts Programming

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## PROMOTING INTERDISCIPLINARITY: ITS PURPOSE AND PRACTICE IN ARTS PROGRAMMING

Each discipline provides education and society with a unique perspective of the world, yet independently, disciplines can only go so far when attempting to address our greatest challenges. To go beyond the limits of the discipline, one must employ interdisciplinary approaches, which include being driven by complex questions, seeking collaboration from multiple disciplines, and integrating their understandings by finding common ground. The arts create an amazing opportunity for interdisciplinary exploration and development with other disciplines which benefits arts leaders and educators, students and departments in higher education, and the local community. This article seeks to explore interdisciplinarity and its benefits by providing diverse, successful case studies including a performance salon, talk back, symposium, recital, and exhibition where the arts, science, religion, culture, and technology work together to enhance one another and lead to fruitful results.

### Introduction

Albert Einstein began playing the violin at age six, and through two world wars and two marriages, fifteen violins, all affectionately called “Lina,” and the most universe-altering discoveries of the twentieth century, music was the genius’ constant companion. “I live my daydreams in music. I see my life in terms of music,” he said.<sup>1</sup> His daydreams led him into thought experiments about riding on a light beam or an elevator through space. To Einstein, Mozart’s sonatas were so perfect in their form that it seemed his music had always existed in the universe, and that Mozart had been its discoverer. His lifelong endeavor, in the words of biographer Walter Isaacson, was to discover his own piece of this “harmonious reality underlying the laws of the universe.”<sup>2</sup> Music was the key unlocking those secrets. Supposed to have been responding to the origin of the theory of relativity, Einstein said, “It occurred to me by intuition, and music was the driving force behind that intuition. My discovery was the result of musical perception.”<sup>3</sup>

Interdisciplinarity refers to a way of thinking about and studying the world that privileges creative connections between multiple ways of thinking, connections like the ones Einstein saw between Mozart’s sonatas and the nature of light or the space-time continuum. Interdisciplinarity invites collaboration as a rule rather than an exception and offers a way forward as

<sup>1</sup> Justin Wildridge, “Albert Einstein: His Musical Life,” CMuse. December 2017, <https://www.cmuse.org/albert-einstein-music/>.

<sup>2</sup> Walter Isaacson, *Einstein: His Life and Universe*, (New York: Simon & Shuster, 2007), 3.

<sup>3</sup> Justin Wildridge, “Albert Einstein: His Musical Life,” December 2017, CMuse, <https://www.cmuse.org/albert-einstein-music/>.

we grapple with challenges so grand in nature that they cannot be solved through any single lens. Performing arts leaders and educators have a unique role to play in expanding the reach of interdisciplinarity in undergraduate institutions, by which they can transform the role of arts departments at universities and a generation of future leaders.

### Interdisciplinarity Defined

Interdisciplinary research was defined in 2005 by the National Academy of Sciences as that which, “integrates information, data, techniques, tools, perspectives, concepts, and/or theories from two or more disciplines or bodies of specialized knowledge to advance fundamental understanding or to solve problems whose solutions are beyond the scope of a single discipline or area of research practice.”<sup>4</sup> The three foundational aspects of interdisciplinarity that emerge are that interdisciplinary endeavors must revolve around a complex question, have contributions from multiple disciplines, and somehow integrate those contributions. Any interdisciplinary pursuit is driven by questions and issues that cannot be answered within a single discipline, issues like climate change, global migration, and cyber-attacks. Otherwise, there is no need to cross long-entrenched disciplinary borders. Participants from multiple disciplines bring the psychological, ecological, economic, political, and aesthetic causes and effects of a problem to light. A “multidisciplinary” approach becomes interdisciplinary when the approaches are integrated, as Newell states: “By definition, interdisciplinary study draws insights from relevant disciplines and *integrates* those insights into a more comprehensive understanding”<sup>5</sup>.

What interdisciplinary studies researcher Allen Repko calls the “mysterious black box” of integration is creating common ground.<sup>6</sup> He defines interdisciplinary common ground as “one or more theories, concepts, and assumptions by which conflicting insights can be reconciled and integrated. Creating common ground involves bringing out potential commonalities underlying the conflicting and theory-based insights so that these can be reconciled and ultimately integrated.”<sup>7</sup> Kockelmans highlights its importance: “The search for a common ground is the fundamental element of all [interdisciplinary] investigation. Without such common ground, ...genuine

<sup>4</sup> *Facilitating Interdisciplinary Research*, (Washington D.C.: National Academies Press, 2005), 2.

<sup>5</sup> William H. Newell, “A Theory of Interdisciplinary Studies,” *Issues in Integrative Studies*, no. 19 (2001): 2.

<sup>6</sup> Allen F. Repko, “Integrating Interdisciplinarity,” *Issues in Integrative Studies*, no. 25 (2007): 13.

<sup>7</sup> Allen F. Repko, *Interdisciplinary Research: Process and Theory*, (Thousand Oaks, CA: SAGE, 2008), 272.

communication between those who participate in the discussion would be impossible.”<sup>8</sup>

### **Purpose: Interdisciplinarity’s Benefits**

Interdisciplinarity benefits individuals, organizations, and universities. The opportunity to connect multiple passions or interests frees individuals from the rigid disciplinary structure of “ivory towers” and helps develop critical thinking and creative problem solving. Creativity is vital for innovation. In the sciences, P.B. Medawar says, forming a hypothesis is “an imaginative or inspirational act.”<sup>9</sup> Interdisciplinary events, performances, and projects feed the imagination and inspire undergraduates seeking to carve a new path for how they may influence change. For Myra Strober, Professor Emerita at Stanford, the “inherent rewards” of interdisciplinarity for foundations and businesses are creativity, productivity, and better problem-solving.<sup>10</sup> The National Academy of Sciences found that among university students, interdisciplinary courses, especially socially relevant ones, are popular.<sup>11</sup> Newell puts forward seven benefits of interdisciplinary study to the university that range from its philosophical goals to pragmatic administrative considerations:

[Interdisciplinary] courses promote desirable liberal education outcomes for students, and faculty development for their teachers. Interdisciplinary study prepares future professionals to confront the complex behaviors they will face on the job. It produces new knowledge by synthesizing insights from old knowledge about specific complex systems and by freeing scholars to ask new questions about them. It facilitates fundamental critique...and it reduces the pressure for complete “coverage” of each discipline, thus eliminating an obstacle to downsizing.<sup>12</sup>

In the university environment, performing arts leaders and educators collaborating with other departments increases opportunities to share resources and personnel, increases access to technology and supplies, and increases the visibility of arts departments on campus. It also creates new audiences by engaging faculty from other departments that invite their

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<sup>8</sup> Joseph J. Kockelmans, “The search for a...” in “Integrating Interdisciplinarity,” by Allen F. Repko, *Issues in Integrative Studies*, no. 25 (2007): 15.

<sup>9</sup> P.B. Medawar, “An imaginative or inspirational act,” in J. Linn Mackey, “Rules are Not the Way to Do Interdisciplinarity,” *Issues in Integrative Studies* no. 20 (2002): 127.

<sup>10</sup> Myra Strober: *Interdisciplinarity: The Four-Wheel Drive Approach to Complex Problems*, video file, 14:50, posted 2010, <https://www.youtube.com/watch?v=Yd0QIFBuZkk>.

<sup>11</sup> *Facilitating Interdisciplinary Research*, (Washington D.C.: National Academies Press, 2005), 2.

<sup>12</sup> Newell, “A Theory,” 5.

students to attend performances and community leaders that help spread the word. Each member of an interdisciplinary team brings the necessary depth and understanding of their discipline. Their expertise, combined with fundamental knowledge of other disciplines, allows interdisciplinary endeavors to flourish and achieve their maximum potential.

### **Practice: Case Studies**

Performing arts leaders and educators have the opportunity to invite people with diverse strengths to create with them by uncovering common ground that paves the way for creativity and better problem-solving. The process is more simple and natural than it may appear; collaboration helps leaders share the burden and the benefits flow organically. The process begins when you ask, “To what does this piece of art connect? What other disciplines could contribute?” Reaching out to leaders across the campus or community and developing complementary programming can elevate any part of your existing season—an art installation, music recital, dance concert, theatrical production, or a performance festival—and engage audiences on a higher level. Posing an interdisciplinary challenge in the classroom can create research and performance opportunities for students. The following case studies of an interdisciplinary salon, talk back, symposium, recital, and exhibition demonstrate how arts leaders and educators in Hampton Roads and Richmond, Virginia created dynamic interdisciplinary events for their audience and students. They explored complex questions, invited collaboration from multiple disciplines, and integrated those disciplines into a more comprehensive understanding. In doing so, they discovered common ground and reaped the benefits of inter-department relationships, community partnerships, broader audience bases, and they created dynamic educational experiences for many undergraduate students. They immersed their students and audiences in a deeper understanding of multiple disciplines by including experts in the creative process, rather than relying on their individual knowledge bases and secondary research. All of these events were part of a course or a regular season, and exploring them moves the formal case for interdisciplinarity in arts programming into practical guidance. How can interdisciplinary collaboration inspire and enrich your next season?

#### **1. Theater Performance Salon**

Performance salons can expand a performing arts organization’s programming and add to an audience’s experience. Salons bring people together through conversation and encourage questions, civil discourse, and the communication of ideas. Each salon’s structure can differ greatly and

it can cover a range of interdisciplinary topics so long as its specific focus is clearly defined. When determining a salon possibility, performing arts leaders can ask the question, what other academic disciplines or community partners can connect with this event and enhance it?

TheaterCNU at Christopher Newport University in Newport News, Virginia answered that question when they produced *Silent Sky* by Lauren Gunderson and created an interdisciplinary salon to complement the production. *Silent Sky* tells the story of several female astronomers at the Harvard Observatory during the early twentieth century. The play centers around the life and work of Henrietta Leavitt, whose discovery of the period-luminosity relation enabled Edwin Hubble to prove the universe's extent beyond the Milky Way. The *Silent Sky* salon invited local speakers from the NASA/Langley Visitor Center and the local Living Museum and Planetarium along with several CNU faculty. Building community partnerships with local organizations can create lasting relationships that enhance your audience and their patrons as well. Such interdisciplinary relationships were the backbone of the *Silent Sky* salon, in which experts delivered pre-show talks for the audience illuminating a specific theme within the show. Speakers included professors in Astronomy, Physics, History, English and Art, an astronomy curator at the Virginia Living Museum, and the STEM Education Specialist at the Virginia Air and Space Center. One talk given by Dr. Anna DeJong entitled "Female Role Models Needed: How to change attitudes about women in Physics, Engineering and Computer Science" stressed the importance of encouraging girls and young women in the STEM fields.

In an interview, Dr. DeJong praised the production and salon, saying, "I wish we would see more things like this (*Silent Sky*). It's a great way to teach both young boys and young girls what it's been like in the past. The more that we can get it out there too, because even society as a whole needs to be more accepting of female scientists."<sup>13</sup> Dr. DeJong's salon talk and the production created a powerful forum to discuss women's contributions to science and the need for female role models to inspire future scientists.

These diverse talks deepened the interdisciplinary engagement of the production through partnerships with other academic departments and community organizations. This salon brought together artists, academics, and audience to share a conversational common ground within a public performance place.

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<sup>13</sup> Samantha Camiletti, "Cast Members Discover the Science Behind 'Silent'," Captain's Log (Newport News, Virginia), Nov. 11, 2015, [https://issuu.com/thecaptainslog9/docs/issue\\_10](https://issuu.com/thecaptainslog9/docs/issue_10).

## 2. Theater Festival Talk Back

Originating in 2005, the Richmond, VA Acts of Faith Festival is the largest faith-based theater festival in the United States, providing a prime example of a successful interdisciplinary event that integrates the arts and spirituality. Local theater practitioners Jeff Gallagher, Daniel Moore, and Bruce Miller joined together as a way to bring people of all faiths together in a safe space to discuss their beliefs.<sup>14</sup> Over twenty local, established theaters participate in the festival with associated and fringe productions as well. Sponsored in part by local churches, each production holds talk backs, engaging the audience after the performance in a discussion with the cast and director centering on the aspects of faith raised or explored in the play. Performances for festival productions are some of the most well attended in the Richmond theater community, with strong attendance on talk back show dates to participate in the Q&A session led by a festival member with the cast and director exploring the topics of faith broached by the play and the characters. The “festival is ecumenical and inclusive, assuming a very broad understanding of faith...[the] hope that folks walk away from the shows with a desire to take their faith deeper and recognize that even in our differences, we are all the same in our humanity.”<sup>15</sup>

The Acts of Faith Festival highlights the interdisciplinary idea of exploring and addressing complex questions. From rehearsal conversations to talk backs during the run of the shows, the complex questions find active participants from various backgrounds and faiths who seek understanding of the ideas broached in the play. The plays in the festival create the common ground for audience members to discuss matters of faith. Richmond theater practitioner Zack Owen has participated in five Acts of Faith Festival productions in various capacities. Owen’s commitment to the festival lies in his belief that “at its most basic level, art is about communication. It creates a safe space for us to talk about issues that are not always easy to discuss in everyday life. Religion and faith...can be taboo in everyday conversation, especially when two people disagree... This festival inspires people to step outside of their comfort zone and engage with works that they might not otherwise... When people are forced to explore difficult topics head on, some of the best breakthroughs happen.”<sup>16</sup> The interdisciplinary Acts of Faith Festival adds value to the community, increases theater attendance, and broadens the role of local, professional theater.

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<sup>14</sup> “Acts of Faith Theater Festival,” August 9, 2018, Acts of Faith Festival, <http://www.theactsofffaith.org/about.html>.

<sup>15</sup> “Acts of Faith Theater Festival.”

<sup>16</sup> Zack Owen, email interview with Danielle Hartman, August 3, 2018.

### 3. Dance Symposium

A modern symposium conjures images of lecture halls, conference tables, and poster presentations, but the term comes from the ancient Greek drinking party that followed a fine meal, and in the sixteenth century referred to “a convivial gathering of the educated.”<sup>17</sup> Ann Mazzocca and Dr. Elizabeth Moran, Professors of Dance and Art History, respectively, at CNU, have created an annual interdisciplinary symposium that draws on these roots. The Symposium on the African and Caribbean Diaspora, now in its fifth year, seeks to “educate our CNU and greater community about African and African diaspora cultures and cultural products. It seeks to explore the ways in which Africanist elements are part of our own culture and exist among us, reflecting culture that already is a part of CNU and our greater Hampton Roads community.”<sup>18</sup> The free, public, one-day event presents scholarship in concert with music and dance performances, and has included faculty from Theater and Dance, Art and Art History, Modern and Classical Languages and Literatures, Anthropology and Sociology, and History, as well as a guest presenter from the Departments of Theater and Africana Studies at William and Mary. Mazzocca described some of the events that have comprised this “convivial gathering”:

Dr. Artisia Green (Theater, Africana Studies) from William and Mary presented on the orishas and Yoruba influence in August Wilson’s *Fences*. [Mazzocca’s] students presented choreography in process that incorporated Africanist elements within a contemporary context including spoken word recitation of Nikki Giovanni’s “Ego Tripping.” Dr. Johnny Finn (Geography) has presented on Cuba and [Mazzocca’s] students have presented Afro-Cuban folkloric dance. Often there is a fine art component that also speaks to the symbolism embedded within images and how those symbols reflect larger elements of religious syncretism and embodiment -- all aspects of Africanist philosophical and aesthetic approaches to being.<sup>19</sup>

These side-by-side lectures and performances presented an example of integration, as audience members came to a “more comprehensive understanding” of the African diaspora through multiple disciplines.<sup>20</sup> A lecture alone may tell audiences that African and African diaspora influences surround them and make up their own cultural landscape, but a dance performance with recognizable elements is irreplaceable for helping audiences

<sup>17</sup> *Online Etymology Dictionary*, 2018 Douglas Harper, “symposium (n.),” <https://www.etymonline.com/word/symposium>.

<sup>18</sup> Ann Mazzocca, email interview with Shannon McNeely, October 21, 2017.

<sup>19</sup> Ann Mazzocca, email interview.

<sup>20</sup> Newell, “A Theory,” 2.

identify those influences. A movement piece may contain within it great cultural significance, but without an expert illuminating it, the audience will see only through their current lens. Interdisciplinary integration gives audiences new tools for engaging the world around them whether it be the mural on the street corner or the new coworker across the conference room table, and it does not have to result from months-long research studies. What faculty on campus would benefit from a musical or movement-based illumination of their most recent research? What influences in your own work may others at your university have studied from different angles? The common ground that you discover in creating and presenting together may hold the seed from which an undergraduate student's performance or project grows.

#### 4. Music Recital

The music recital is a mainstay of any performing arts programming and a regular feature on many college campuses. The recital fulfills many functions and provides a performance opportunity for the novice or seasoned musician or vocalist. Contemporary audiences are challenging arts organizations and educators to find innovative and interactive ways of presenting both the classical and contemporary music repertoire within the recital format. Some performing arts programmers and educators find new forms of engagement by looking through a historical lens to reveal performance contexts from the past that provides the engagement contemporary audiences are craving through integrating music and history.

Dr. Danielle Ward-Griffin, Assistant Professor of Music in the Department of Music at CNU, created an assignment for her upper level seminar class with the goal of helping students see the processes of researching and writing as vital steps to becoming articulate musicians and scholars. Ward-Griffin arranged for students to view and then select a song from the Josephine L. Hughes Collection of American sheet music at the Paul and Rosemary Tribble Library at CNU. This special collection holding of over 5,000 compositions dates from 1797 to the 1940s. After viewing them, she instructed students to research and "write a 'backstory'" that both historically contextualized it and used the object as a jumping off point for telling a broader history of American music.<sup>21</sup> Ward-Griffin took inspiration for this assignment from a popular radio program *Backstory with the American History Guys* on National Public Radio. The program takes a given subject and then gives listeners many historical perspectives on it.

Once the assignments were complete, Ward-Griffin collaborated with

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<sup>21</sup> James O'Leary and Danielle Ward-Griffin, "Digging in Your Own Back Yard: Archives in the Music History Classroom," *Journal of Music History Pedagogy* 7, no. 2 (2017): 6.

the Department of Music and Amy Boykin, Instruction Librarian at Tribble Library, and the students presented their research and then performed their selected works in a public history event. *Parlor Song: A Musical Soirée in the Josephine L. Hughes Collection*, was performed by candlelight in the intimate drawing room environment of the Blechman Room in the Tribble Library.

Amy Boykin commented on the performance's interdisciplinarity:

... there were so many approaches to the music, not just sheet music itself and an appreciation of the music in general (from the 1800's), but the history and culture that would have surrounded its composition and use in the American home from that time period were also explored. I think this multi-part assignment (along with the Soiree) gave students a fuller picture of the music and its context rather than just writing a research paper and the assignment ending there.<sup>22</sup>

*Parlor Songs* is an excellent example of how undergraduate students can integrate multiple disciplines to gain a richer understanding of the subject and how the work students create within a course can extend well beyond the classroom to create an interdisciplinary performance event.

## 5. Art Exhibition

Finding partnerships and building interdisciplinary connections can be as easy as knowing what future events are being planned in your community. Alan Skees, an Assistant Professor of Digital Arts and New Media at CNU, partnered with the Peninsula Fine Art Center (PFAC) in Newport News, Virginia on a NASA exhibition that coincided with the NASA Langley Centennial celebration. *Soaring: Work from NASA's Art Collection* featured works of art created by Robert McCall, Andy Warhol, Annie Leibovitz, Nam June Paik, William Wegman, and Chakaia Booker. Skees approached PFAC about having his printmaking students create an additional educational project to add to the NASA art exhibition. PFAC agreed and welcomed the opportunity to have a STEAM (science, technology, engineering, arts, and math) event partner with the NASA exhibition. They planned a free community day to open the exhibit, to which Skees' students contributed a large-scale printmaking demonstration.

Inspired by the NASA art collection, Skees incorporated a STEAM project into his printmaking course and assigned his students to design and carve a huge 4 x 8 foot relief wood block whose theme was "the future." Students approached this challenge in a number of ways conceptually and touched on topics of climate change, politics, pollution, space, and

<sup>22</sup> Amy Boykin, email interview with Denise Gillman, October 25, 2017.

bio-medical technology. Skees shared that, “One student did images in her portfolio based on future technology in the areas of biology and human augmentation. Another student took a cyberpunk and/or social class approach and played with ideas of only the wealthy extending or improving their lives through body enhancements. There was also exploration of catastrophic natural disasters caused by humans by other students. One student did a series of images of bridges being swept away by waves.”<sup>23</sup> As the NASA Langley celebration day approached, Skees reached out to BASIC, a local construction company, who happily donated a steamroller and crew to help students with the printmaking process. On the free community day, the steamroller turned the wood carvings into huge prints—the students’ finished product.

The NASA art exhibition and the STEAM educational project had over 700 visitors of all ages who visited both events. Skees shared that the PFAC director and curators, and NASA Langley Directors were impressed with the printmaking part of the event. The community partnership forged between NASA, PFAC, Skees, and his students made this a successful interdisciplinary STEAM event that displayed a powerful fusion between art, science and technology.

## Conclusion

The arts provide a unique opportunity for interdisciplinary work to develop through the three foundations: complex questions, multiple disciplines, and integration. Interdisciplinarity, a way of thinking about and studying the world that privileges creative connections between multiple ways of thinking, allows for an approach in a variety of ways through the creation of common ground. This common ground not only unites those involved, it also allows greater access to multiple fields of study for students and draws in new participants, patrons, and audience members bringing in more revenue and promoting the arts organization. The use of interdisciplinary performances or works in the fine and performing arts allows one to expand marketing to those who may not frequent such events, but will find interest in one of the disciplines explored or incorporated. On college and university campuses this increases diversity in student and faculty attendance and draws in new community members. With a larger and more diverse audience, one can develop relationships with other departments and local organizations who can enhance and support future interdisciplinary events through participation during the production process. The case studies explored here demonstrate the success of such endeavors.

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<sup>23</sup> Alan Skees, email interview with Denise Gillman, July 17, 2018.

The aspects of interdisciplinary work and the creation of common ground found success through the fine and performing arts. Arts leaders and educators frequently use their craft to explore ideas outside of themselves, and it is time to expand their interdisciplinary endeavors to benefit their programs, universities, and communities.

...

**Shannon Farrow McNeely** writes and researches on science-themed theater and STEAM education. With Gillman and Hartman, she co-authored the article “How Science Plays Are Building Interdisciplinary Bridges in the Classroom and Inspiring Undergraduate Research and Creative Activity (URSCA)” published in *Scholarship and Practice of Undergraduate Research* (2018). McNeely played the role of Henrietta Leavitt in the collegiate premiere of Lauren Gunderson’s science-themed play *Silent Sky* at Christopher Newport University. Her thesis research “Act Like a Scientist: Science Theater as a Creative Approach to Address Gender Disparity in STEM Careers” was presented at the *Paideia* Conference (2016) and the Comparative Drama Conference (2017), received Christopher Newport’s Cupola Award, and is published in their journal of undergraduate research (2016). She graduated from Christopher Newport with her B.A. in Fine and Performing Arts (2016) and her M.A. in teaching (2017). McNeely teaches third grade in Henrico County, Virginia.

**Denise Gillman** is an Associate Professor of Directing & Dramatic Literature at Christopher Newport University (CNU) in Newport News, VA and a Stage Directors and Choreographers Union member. Science-themed plays are a major focus of her teaching, research and scholarship and both her professional and educational directing activity. At CNU, she teaches her signature course “Science on the Stage” for the Honors Program. Nationwide, she is one of only a few professors teaching a course that promotes interdisciplinarity between the arts, humanities and sciences. She has given many science play presentations at regional, national and international conferences. Ms. Gillman received the 2014 Association for Theater in Higher Education and Kennedy Center American College Theater Festival Prize for Teaching Innovation for discovering new pathways for student success in the field of theater through her teaching, directing and scholarship on science-themed plays. She has created, along with some former and current students, a science plays catalogue website ([scienceplays.org](http://scienceplays.org)) that provides information about published science plays.

**Danielle Hartman** received a BA in theater and English from CNU and an MFA in theater pedagogy from Virginia Commonwealth University, where she wrote her thesis, “In Pursuit of Women Scientists: Using Science Plays to Promote Women Entering STEM Disciplines.” This work received the American College Theater Festival/Kennedy Center American College Theater Festival prize for Innovative Graduate Studies in 2016. Her play *Core of Temptation* won the 42nd Annual National Playwriting Competition hosted by Wichita State University, where it was produced in 2016. Her play tackles the question of religion versus science in the creation of the universe. She currently works as an educator at Virginia Commonwealth University and University of Mary Washington and has presented her work at several regional and national conferences including Southeastern Theater Conference and the Comparative Drama Conference.

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