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Research and Creative Scholarship

Andrews University

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Research and Creative Scholarship

at Andrews University

Summer 2016, Volume 7

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COVER: *Herb Helm has been raising parrots for over 30 years. While doing his doctorate, he worked on a bird farm in Mississippi that supplied birds for pet shops in the southeast. "Parrot Haven" is made up from photos taken of Macaws in Florida. The blue Macaw belongs to Herb.*

AUGUST 2016



Rigorous investigation, sound methodology, and creative analysis are trademarks of research and creative scholarship. All "texts" and "elements" demand to be treated with integrity, whether the musical text of a Beethoven sonata, the visual text of a painting or documentary film, or the elements of heterocyclic amines and mosaic remains. The faculty highlighted in this brochure exemplify a commitment to inquiring with integrity that represents the philosophy of Andrews University.

For Ryan Hayes, associate professor of chemistry, arginine-based compounds arising from the burning of soy-based products are the elements under investigation. Along with his students, Hayes is working to determine their mutagenicity, which has both scientific and nutritional implications.

Randall Younker, professor of archaeology and history of antiquity, Constance Gane, associate professor of archaeology and Old Testament, and Paul Ray, associate professor of Old Testament and biblical archaeology, form part of a team that is excavating San Miceli, an early Christian archaeological site in Sicily, in hopes of gaining a better understanding of Sicilian paleochristianity.

John Peckham, associate professor of theology and Christian philosophy, is developing a theological method based on a canonical reading of the Bible, which provides a framework for analyzing the concept of divine love and the problem of evil.

Carla Trynchuk, professor of violin, and Chi Yong Yun, assistant professor of piano, collaborate on a violin-piano repertoire, performing together across the United States and overseas as a duo and in chamber ensembles.

Psychology professor and artist Herbert Helm combines his love of diversity in his projects as a researcher and watercolorist. An award-winning artist, he also mentors undergraduate students in psychology research.

Paul Kim, associate professor of documentary film, tells stories through film. His work is both ethnographic and artistic, whether capturing the Holbrook Indian School narrative or the legacy of Andrews University's President Emeritus, Niels-Erik Andreasen.

Vanessa Corredera, assistant professor of English, analyzes the implications and reimaginings of race in renaissance literature and its contemporary readings. She engages a variety of media types, including a podcast, film, novel and play adaptation.

Over the past year, our faculty and students have hosted and participated in a number of academic conferences, exemplified by two conferences mentioned here. The third annual Andrews Research Conference, "Early Career Researchers and Creative Scholars in the Arts and Humanities," featured presentations by Adventist scholars in the areas of visual art and design, education, literature, music, theology and more. Renowned Bible scholars from around the world came together for a discussion of the literary characteristics of the Pentateuch at the "Exploring the Composition of the Pentateuch Conference."

Andrews University faculty and students give presentations at national and international conferences and publish in a wide array of peer-reviewed venues. Their many accomplishments are a testament to their dedication to research and creative scholarship.

Sincerely,

Gary W. Burdick
Dean of Research

BEWARE THE MUTANT VEGGIE DOG

Mutagenicity and Plant Proteins

It all started with charcoal. Ryan Hayes, associate professor of chemistry, worked briefly with local company NeoBiotech on charcoal patches in 2011 and started asking questions like, “Why are some burned things good, like charcoal, but other burned things, like grilled meat, cause cancer?” Hayes posed the question to his General Chemistry class, piquing the interest of student Tyler Pender. The two discussed possible theories and a research project was born.

“Charcoal is made from carbonaceous material, usually coconut husk, that is burned at very high temperatures. Carbon is all that is left. Charcoal is non-polar and passes through your system. It’s harmless,” explains Hayes.

Charred food is another matter. “Food is not burned at a high enough temperature for it to be reduced to purely carbon atoms.” In burned meat, molecules called heterocyclic amines (HCAs) are formed when creatine reacts with various amino acids. HCAs are carcinogenic, meaning that they cause cancer.

HCAs are so named because they contain other elements besides carbon (hetero), have a ring-like structure (cyclic), and contain nitrogen (amine). Researchers have isolated about 25 different compounds, which have been shown to cause cancer in animals.

According to the National Cancer Institute, meat cooked at temperatures above 300°F or cooked for long periods of time “tend to form more HCAs.” Epidemiologic studies have confirmed that, “high consumption of well-done, fried, or barbecued meats is associated with increased risks of colorectal, pancreatic, and prostate cancer.”¹

RIGHT: Ryan Hayes, associate professor of chemistry, supervises Irene Hwang, senior biochemistry/pre-dentistry major, as she sets up an experiment to burn amino acids from plants (soy protein powder), that will be analyzed for possible mutagenic molecules after the burning process.

Hayes and Pender wondered what would happen if non-meat protein was burned. “All the research identified that creatine, which comes from the muscle tissue of animals, had to be present in order to form these molecules. Plants don’t have creatine, but they do have other amino acids, so we asked, is it possible to get carcinogens from burnt plant protein?”

They began reading relevant literature and were able to find previous research that suggested arginine, a plant amino acid, might react similarly to creatine. This is of particular interest to vegetarians since arginine, along with all the other major amino acids, is found in soy protein.

As they narrowed down their literature search to arginine-based studies, Hayes and Pender came across the 1994 research papers

of James Felton and his research group. “The researchers found that mutagenicity can occur when you burn arginine with other amino acids,” says Hayes. Mutagenic molecules alter DNA, which means they may be carcinogenic.

Felton and his colleagues discovered that some burned grains developed mutagens, “but they did not continue the research to isolate any of the molecules or identify chemical structures.” It was a research project waiting to be continued. “No one was looking at the chemical structures of these potentially mutagenic and potentially carcinogenic molecules from burnt plant proteins,” says Hayes.

“Tyler and I started looking at the methods used in the creatine-based research for burning the amino acids, separating the molecules, and honing in on heterocyclic amines,” he



says. As they learned the various methods and developed them for their specific project, they came across a surprising discovery.

Initially, they thought that arginine might create the same compounds as creatine when burned, since they share a similar structure. However, “what Tyler and subsequent students have shown is that we are making something different,” says Hayes. He refers to these new compounds as arginine-based heterocyclic amines.

As the research developed, Hayes incorporated more students, funded by Undergraduate Research Scholar awards, into various aspects of the project and received internal Faculty Research Grant funding. The research team, known as the HCA (heterocyclic amines) Group, has spent the last several years acquiring the necessary equipment and refining their



methods of burning, extracting and isolating various arginine-based heterocyclic amines. “We knew what the problem was,” says Hayes, “but getting the methods in place and bringing in new equipment was important.”

This last school year, the HCA group began their experiments by combining arginine with the amino acid phenylalanine. The process begins by burning the mixture at a high temperature. Once the mixture is burned, they extract the desired material using a number of different solvents, and then separate the molecules using a newly acquired preparative scale High Pressure Liquid Chromatography (HPLC) machine. Finally, they analyze the



Ryan Hayes

molecular structure using nuclear magnetic resonance and mass spectroscopy. Each different molecule has to be isolated and analyzed separately.

Hayes is anxious to get structural

information on all the various molecules. David Alonso, a former Andrews University chemistry professor who now works at LECO in St. Joseph, Michigan, has offered to help the HCA group with the structural analysis aspect of the research. LECO is a manufacturer of chemical analysis equipment, “and they have some very specialized equipment that could help us figure out the structure,” says Hayes. Once the structural data has been analyzed and they can demonstrate that the molecules they are finding are a new class of heterocyclic amines, the team can publish their material.

Besides analyzing the structure, one of the most important aspects of the research is the Ames test, a mutagenicity test used by previous researchers that is conducted at the same stage as the spectroscopic analysis. Robert Zdor, professor of biology, has been working with the HCA Group to refine the test.

Eventually, tests will need to be run on the molecules to determine if those compounds found to be mutagenic are also carcinogenic. However, that would require animal testing, the approval of the Institutional Animal Care and Use Committee and additional funding. For now, the project

is limited to studying mutagenicity.

“We’ve had one compound go through the Ames test and show that it was as mutagenic as the molecules created by burned creatine,” says Hayes. While the researchers are excited, they are also a little concerned. Soy protein isolates, which are used in vegetarian soy products, contain arginine. Soy is “high in arginine and in all the amino acids,” Hayes explains. “It’s the complete protein source.”

Most scientists see meat as a larger problem, but vegetarians may find that burning a veggie hot dog is no safer than burning one made of meat. “We may be exposed to something toxic that we don’t know about,” says Hayes. “I think one of the lessons coming out of this is that you have to be careful. You can’t just do whatever you want to plant based food.”

“The other thing that we will probably find out is that when you isolate these amino acids away from the plant product, they are more susceptible to becoming mutagenic and carcinogenic under heating conditions than the whole plant.” The one bright spot in the

Most scientists see meat as a larger problem, but vegetarians may find that burning a veggie hot dog is no safer than burning one made of meat.

meat studies was the finding that herbs and seasonings on the meat reduced carcinogens. This implies that the whole plant, due to its natural antioxidants, has built-in barriers to becoming carcinogenic.

“I think we may find that if we burn a whole soybean, it may not produce these heterocyclic amines.” Burning a veggie hot dog that has been processed and contains protein taken away from the structure of the plant, and its carcinogen-blocking antioxidants, may be another matter. Hayes hopes to involve the Department of Public Health, Nutrition & Wellness in investigating the cooking conditions of soy-based foods and the possible effects of frying and grilling.

So far, the team has only analyzed the compounds resulting from mixing arginine and phenylalanine. All the other amino acids remain to be tested with arginine, but Hayes is optimistic about long road ahead. “It’s a lot of work to run these tests,” he admits, but he has formed a team of capable students who understand the literature and methods and are invested in the project. “It’s so rewarding to see the students take ownership of the project,” he says. “You have a real partnership with the student at that point.”

Members of the Hayes group, like Tyler Pender, J.C. Lynch, Zach Reichert, Michael Plantak and Andrew Stewart, have developed the research into Honors theses and independent research, presenting at the Honors Scholars & Undergraduate Researchers Poster Symposium and the Michigan Academy of Science, Arts & Letters.

Although most of these students have now graduated, they have trained successors to continue the work. For Hayes and his students, this research project “shows what Andrews University can do. We can address and inform health-related issues.”

¹ <http://www.cancer.gov/about-cancer/causes-prevention/risk/diet/cooked-meats-fact-sheet>. Accessed July 15, 2016

REDISCOVERING SAN MICELI

In 1893, Sicilian locals found a gold coin in a field just north of the town of Salemi, Sicily. Excited about the find, local archaeology enthusiasts contacted Antonino Salinas, the director of the National Museum in Palermo. Salinas began excavating the site later that year in a whirlwind dig that lasted only a few weeks.¹

His findings—a church with three mosaics, tombs, buildings, monumental architecture, Greek and Latin inscriptions, and more coins—were published with equal rapidity. Salinas believed that the lower mosaic he had uncovered was from the earliest church in Sicily.



The site, known as San Miceli, became a subject of controversy, with scholars debating whether or not the church really could be the earliest. They questioned the credibility of Salinas' quick work, and since some of the

smaller artifacts had disappeared, it was impossible to come to any definitive conclusions. The beautiful mosaics of San Miceli were reburied and the site slipped into obscurity.

In 2012, Randall Younker, professor of archaeology and history of antiquity, director of the Archaeology PhD program and director of the Institute of Archaeology at Andrews University, began looking into the possibility of starting an excavation at a New Testament or Paleochristian (Early Christian) site.

Andrews University, through the Madaba Plains Project², has had a presence in Transjordanian archaeol-



The team at the 2015 San Miceli Conference in Sicily.

ogy for almost 50 years with digs at both Tall Hisban and Tall Jalul in Jordan. Although the digs began as strictly Old Testament excavations, archaeologists have recently expanded their research scope to include the Roman, Byzantine and Islamic periods. This is due to the fact that one must dig through remains from these periods in order to access the older material and that a more complete picture of the site emerges when all the data, rather than material from just one time period, is examined. Still, the digs in Jordan did not offer much by way of New Testament and Early Christian history.

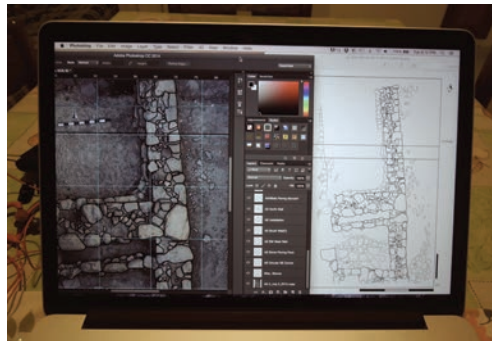
Elisabeth Lesnes, professor at Istituto Tecnico Statale per il Turismo Marco Polo, Palermo and a research associate of Younker's, had connections in Sicily, and suggested that Younker look for a site there. As Younker began reading literature on Sicilian archaeology, he came across Salinas' excavation of San Miceli. It seemed like a perfect fit. No one

San Miceli provides archaeology students with the Paleo-Christian context for excavation, which is a first at Andrews and in the Adventist church. Students can now excavate at sites relevant, both in location and time, to the Israelite exodus, the monarchy, the exile and the fledgling Christian church.

had excavated the site since Salinas' expedition and it was right in the time period that Younker was looking for.

"According to the ceramic evidence," Younker says, occupation of San Miceli "started in the Roman period in the 3rd century BC and continued to be occupied until the 7th century AD. That's almost 1,000 years of activity in this little village. It was occupied at the time when the pagan Romans converted to Christianity and Christians became the majority," making it a significant site for understanding Sicilian Paleo-Christian history.

In 2014, Andrews University launched its first excavation in Sicily. Younker assigned PhD students as directors to the three fields along with a supervising professor. Constance



ABOVE: Constance Gane's technical drawing in progress
RIGHT: Christopher Chadwick entering data on his iPad

Gane, associate professor of archaeology and Old Testament, and curator of the Horn Archaeological Museum, worked in Field A with student director Christopher Chadwick. This area, according to Salinas' findings, contained architectural remains that were thought to be the ruins of a village or town, as well as tombs. Re-excavation of Field B, the site of the basilica found by Salinas, was directed by student Shellie Cox, with supervision from Younker.

During the first excavation, the team was able to find the original mosaic that Salinas had found, discovering that he had excavated only a portion of it. The new section contains a bird, which is now part of the logo for the site.

"We found new tombs," Younker explains, "and the most exciting discovery was that there was not just one church with three separate floor phases," as previously thought, "but two churches built one on top of the other. We were able to find coins at the very bottom layer of the earliest church and at the top on the destruction layer which enabled us to date it to the time of Constantine II in the 4th century AD." This indeed makes it one of the earliest churches in western Sicily.

The team returned to San Miceli last summer from May 21–July 7 to continue their work along with supporting faculty, and participants from the United States, Canada, France, Germany, Italy, Brazil, Argentina and Peru, among others. Elisabeth Lesnes, co-senior



Randy Younker

project director and local liaison, and Giorgia Lanzarone, a ceramics specialist, organized the Italian participants.

During the second excavation, re-used Doric columns were found in the walls of



the first church, indicating that an earlier pre-Christian building, perhaps a pagan temple, previously stood in the same place or nearby. The second church, built after Vandal invaders demolished the first church in the late 5th century AD, was destroyed in the mid-7th century AD, probably by Arab invaders. "We found two coins, including one gold coin found by Christopher Chadwick, that date to 652–653, right in the destruction layer in perfect condition," says Younker.

In addition, a large destruction layer from the 5th century was found in Field A. "Even though archaeologists have been digging in Sicily a long time, very few have found such a large destruction layer intact. It went across the entire field around the basilica," enthuses Younker. "We have entire rooms where the roof collapsed and we found roof beams and nails. Underneath, we found contemporary amphorae, which are storage jars for trading. This might indicate that the church community was involved in trading. The archaeology specialists were very excited about that."

In the same area, a 7th century destruction layer was found. Michel Bonafe, one of the top ceramic specialists, was particularly excited about this find. "He told me that archaeologists have never found a 7th century layer intact. That's one of the weakest areas in Sicilian archaeology, we don't know much about the ceramics," says Younker.

Diagnostic artifacts, such as coins and pieces of broken ceramics called potsherds, are important for excavations because they allow scholars to date the various archaeological layers. Paul Ray Jr., associate professor of Old Testament and biblical ar-

chaeology, director of archaeological publications, and associate curator for the Horn Archaeological Museum, notes, “We find a lot of western terra sigillata³ and African red slip. These kinds of wares have been known for a long time in Europe.”

Due to the “long history of imported wares,” scholars are able to date ceramic remains down to 25-year increments. “We have experts that come in and tell us exactly what part of a specific time period the artifact is from,” says Ray. The team also uses 3D scanners to scan the objects.

Photography and drawing top plans are another important part of the data collection process. Jacob Moody, a PhD student, took photos of each field every day using an industrial camera pole, which functions like a glorified selfie stick. After taking photos of the fields from several different angles, he used special software to stitch the photos together, creating a 3-D geo-referenced panorama of the field.

The Andrews’ team members are not the only ones excited about what they were discovering. “The local people are very much interested in archaeology,” says Younker. “The press came out several times and we were in several newspapers.” “They are so excited that we care about their history, their ancestry, and their world,” agrees Gane. The local archaeology

group has shown their support for the project by putting together an evening conference at the end of each season to highlight the excavation.

Findings from the excavation have also been presented at the American Schools of Oriental Research (ASOR) annual meeting in a special session dedicated to Sicily. “This year we are having a second all-Sicily session and we have some important speakers including Lorenzo Negro, the director of digs at Jericho and Sicily,” says Younker.

Younker is also working with contacts in Sicily and ASOR to set up an ASOR-run archaeology research institute in Sicily similar to ASOR’s American Center of Oriental Research (ACOR) in Jordan. This would provide visiting and resident archaeology scholars with a central location for relevant books, articles and other resources relating to Sicilian archaeology. It would also function as a place for visiting scholars to stay during extended research periods.

The team returned to Sicily this summer with the goal of learning more about the history and inhabitants of San Miceli. Younker plans to continue opening up a large structure, which they now think is a villa, in Field A and excavate more of the basilica in Fields B and C. “We hope to find some houses,” he says, particularly “earlier houses during the transition” from the Roman period to Christianity.

San Miceli provides archaeology students with the Paleo-Christian context for excavation, which is a first at Andrews and in the Adventist church. Students can now excavate at sites relevant, both in location and time, to the Israelite exodus, the monarchy, the exile and the fledgling Christian church. In all likelihood, early believers meeting together at San Miceli discussed events that took place not far from the Madaba Plains and the sites of Tall Hisban and Tall Jalul.

1 Randall W. Younker, “San Miceli 2015,” The Institute of Archaeology Siegfried H. Horn Museum Newsletter, Winter 2016, 1–2

2 <http://www.madabaplains.org>

3 Fine red Ancient Roman pottery with a glossy slip

Deep Text

Developing a Canonical Theological Method

“Divine love is a central component of God’s character, with abundant implications regarding all areas of theology.”¹ So begins the opening chapter of “The Love of God: A Canonical Method” by John Peckham, associate professor of theology and Christian philosophy.

“The Love of God” was born from Peckham’s dissertation, which he completed at Andrews University. Peckham was originally interested in working on the problem of evil, but found that it was too large to engage in a dissertation. “At the center of the problem of evil is the concept of God’s love,” explains Peckham. Peckham decided to focus on divine love, “not just love itself, but what it is in the context of the God-world relationship, which has implications relative to determinism and other essential theological concepts.”

However, in order for Peckham to study the biblical concept of divine love, he needed a methodology. Adventist systematic theology is still in the developmental stages, so Peckham “had to think carefully about how to construct a model systematically that was consistent with our well-established exegetical models.”

Peckham began by inverting the standard methodology of investigating from “first principles” to the text. Instead, he attempted to begin with the text, searching for what it could tell him about the first principles. Building on the work of Fernando Canale, professor emeritus of theology and philosophy, Richard Davidson, J.N. Andrews professor of Old Testament interpretation, and eminent scholar Brevard S. Childs, Peckham developed an approach he calls the “canonical theological method.”

continued

BELOW: Shelly Cox excavating a tomb at San Miceli



The canonical theological method understands “canon” to mean both rule of faith and a unified collection or corpus, namely the biblical text. For Peckham, “Scripture is the canon because it consists of just those writings that God divinely commissioned to be canonical in the sense of a rule of faith. And if God commissioned them to be canonical in the sense of faith, what else should we build our theology on?”

This method posits that, if one takes the canon as the rule, all interpretations must continually be measured against the canon. Individuals may not come to the same interpretation and may in fact disagree, and, Peckham argues, “our interpretations will never be final. This is not a problem, rather it’s an opportunity to continually reform and correct our views so that they are in line with Scripture.”

While modern scholars took a stance of “hermeneutical positivism,” believing that everyone could come to the same conclusions if they read the text using a certain method, Peckham acknowledges that reading the biblical text is far more complicated. He also disagrees with communitarians, who argue for the community or its creeds to play the role of “normative interpretive arbiter,” reading the text through the lens of the Nicene or other ecumenical creeds in order to reach a consensus.

“The problem with the communitarian view is that if you say there is an extra-canonical normative interpretive arbiter of Scripture, then what truly has functional authority? Scripture can only say what the interpretive arbiter allows it to say,” he explains. Peckham rejects isolationism, the idea that every individual becomes their own interpreter, as well. “We have to recognize that there is a proper role for the community, it’s just not determinative or final.”

So how do we interpret the Scriptures? Peckham suggests looking at the interpretive process as a “hermeneutical spiral,” which he defines as “a continual spiral at two levels of what are called the hermeneutical circles.” In the first circle, there are two parties: the reader and the text. The reader brings presuppositions to the text, “but the text affects the reader and, if it is a canonical text, the reader should always submit to the text. It is a kind of disposition towards the text; an intentional posture that you take, not just a methodological step.”



John Peckham

“I found many things that contradicted what I would have thought, which was comforting, because it led me to believe that I wasn’t imposing my view on the text all the time.”

The second circle “is the circle between the individual parts of Scripture, or micro-exegesis, and the canon as a whole.” The reader’s presuppositions affect how they read the individual texts and their reading of the individual texts informs the understanding of the canon as a whole. “Both should be working together in a reciprocally helpful spiral in a way that the reading of the canon never imposes on the individual texts.”

Exegetically, there may be more than one acceptable reading. But, Peckham suggests, “the canonical reading can help choose between those options. If the canon is a congruent corpus, there may be only one or two options in a given pericope that fit with what the rest of the canon says.”

He applied the canonical theological method in his research on divine love, taking great care to allow his questions of the text to be shaped by the canonical investigation. “I found many things that contradicted what I would have thought, which was comforting, because it led me to believe that I wasn’t imposing my view on the text all the time,” he says with a laugh.

Peckham worked his way through the entire Bible, flagging any texts that related to the questions he was asking. Using this

inductive method, he systematically analyzed all the flagged verses, looking for patterns. His analysis factored in “how words were used in the text both thematically and conceptually. It opened up an abundance of word groups related to delight and pleasure, which are closely associated with love.”

He eventually came to five aspects of divine love, which are distributed across the various canonical sections (law, writings, prophets, etc.). “I also used secondary sources, going through commentaries on both sides of the historical critical argument, and developed a model that responded to the questions about divine love,” he says. He then used that model to flesh out the implications for the God-world relationship.

Peter Lang first published Peckham’s findings in his edited dissertation, “The Concept of Divine Love in the God World Relationship” (2014). “The Love of God,” which builds on his doctoral research, was published in 2015 and won Intersivarsity Press’s Reader’s Choice Award. In November of this year, Eerdmans will publish his book “Canonical Theology: The Biblical Canon, *Sola Scriptura* and Theological Method,” an expansion of the canonical theological methodology he developed for his dissertation.

Peckham is now coming full circle to the topic that originally sparked his interest: the problem of pain. Using the same inductive method, he has systematically surveyed the entire biblical text for relevant pericopes and is now analyzing the themes and patterns that have emerged from the text. Before him lies a laborious journey through the data he has gathered.

For Peckham, the theological landscape changes with his deepening understanding of biblical literature and each new project he tackles. “Classical Theology,” he says, “was trying to build a cathedral that they could defend. I use the analogy of a moving wilderness sanctuary. We aren’t trying to build all the structures of ontology and epistemology, not that we don’t speak to these areas, but we don’t answer all the questions these areas raise because we might not have enough data to answer all of them to our satisfaction. We want to move *with* our understanding of the canon.”

1 John C. Peckham, “The Love of God: A Canonical Model” (Downers Grove, Illinois: Intersivarsity Press Academic, 2015), 15

Sonatas and the Art of Listening

Sonata: literally meaning “a piece of music.” The word has its origins in the Latin word *sonare*, or “to sound.” The word now refers to a specific form of music, which—as famed conductor and composer, Leonard Bernstein, put it—comes from the first movement of the piece. The first movement is characterized by a “perfect three-part balance,” and “the excitement of its contrasting elements. Balance and contrast—in these two words we have the main secrets of the sonata form.” A sonata written for a full orchestra is called a symphony; when written for four instruments, a quartet; for three instruments, a trio; and for just two instruments, a sonata.¹

It is in the latter duo format that Chi Yong Yun, assistant professor of piano and piano area coordinator, and Carla Trynchuk, professor of music and string area coordinator have been performing together over the last several years. Yun, a graduate of Indiana University and doctoral candidate at the University of Illinois, Urbana-Champaign, and Trynchuk, a graduate of Juilliard School, began collaborating shortly after Yun’s arrival at Andrews University in 2008.

“The first step in our collaboration is finding a piece that we want to perform,” Yun says. Some of the venues in which they perform already have an established repertoire. “In other concerts,

we have the liberty to put the program together,” says Yun. The pair usually performs duo repertoire, selecting sonatas from a variety of eras or to fit a specific theme. This last Valentine’s Day, they performed a number of light-hearted pieces including Beethoven’s “Spring Sonata for Violin & Piano,” Sibelius’ “Berceuse” and “Country Dance” in “An Evening of Violin and Piano Pieces” at the Howard Performing Arts Center. Previous concerts have included works by Leclair, Saint-Saëns, Franck, Martinu, Brahms, Faure and Vaughn Williams.

Carla Trynchuk & Chi Yong Yun



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RESEARCH AT ANDREWS

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Trynchuk, Stephen Framil & Yun



Over the course of their seven-year collaboration, they also have incorporated other instrumentalists, such as cellist Stephen Framil or the American Piano Quartet. In 2015, Yun, Trynchuk and Framil performed Schubert's "Piano Trio in B-flat major" and Dvorak's "Trio in F minor" at Andrews University and several locations in Pennsylvania.

As experienced musicians and collaborators, preparation comes easily for Trynchuk and Yun. After working on the pieces individually, they meet to rehearse several times before the performance. "We read through the music together and make some comments," says Trynchuk, "but it falls together very quickly."

Trynchuk and Yun attribute the ease with which they collaborate to each other's musicianship. "It's the musical energy that we get from each other that fuels our collaboration and drives us to keep collaborating. Collaboration requires personal and musical chemistry. Working with a refined musician, like Carla, makes everything so much easier and more pleasurable," asserts Yun. Of Yun, Trynchuk says, "Her artistry is truly exceptional. She performs with a remarkable grace

"I think the art of listening is something that students need to learn. We assume that musicians are constantly listening, but that's not always the case," Trynchuk muses.

and beauty with a natural ability to bring out the entire spectrum of colors, characters, emotions and depth of any composer."

Every part of the collaboration has its joys, but both musicians agree that their favorite aspect is the performance itself. Many of their performances together have taken place on the Andrews University campus as part of the Howard Series performances, Faculty Recitals or Second Sunday Concert Series, but they are in no way limited to the Andrews campus.

For the past several summers, both musicians have participated in the Oregon Music Festival, held in Portland, Oregon. In 2015, both musicians were "artists-in-residence" at the festival. Trynchuk directed the Oregon Music Festival String Program and performed chamber and solo works, while

Yun performed with the Orpheus Academy Orchestra and Oregon Festival Orchestra.

Beyond the personal and professional benefits of their collaboration, Yun and Trynchuk find working together to be helpful in their music studios as well. "Teaching a work you have performed brings a different perspective," Trynchuk notes. "And," Yun adds, "students appreciate coming to a performance and observing how what they are learning is put into practice." "It's an inspiration for the students to have musical role models," Trynchuk agrees.

Seeing these professors perform also provides students with an example of how artists can work together. Yun has been active in promoting a spirit of collaboration among her students. "I developed a piano-ensemble class with the main purpose of educating pianists on collaborative performances, not just as an accompanist, but as a 50/50 collaborative artist," she says. "The goal is for them to learn the balance and technique required to work professionally and musically with other musicians."

"I think the art of listening is something that students need to learn. We assume that musicians are constantly listening, but that's not always the case," Trynchuk muses. If performed correctly, the music itself allows all the featured instruments to be heard. In the pieces they play, Yun notes, "the main elements of the piece expose both instruments. The music gives us equality."

In 2015, the duo traveled abroad to perform in Paris, France and Zagreb, Croatia. "We hope to do more trips together," Yun says. During their tours, both Yun and Trynchuk give master-classes in their separate areas, which enables them to mentor up-and-coming musicians and spread the word about the Andrews University Department of Music.

The pair has already thought about some of the future pieces they hope to perform. "One is the Beethoven-Kreutzer Sonata. If we have one piece that we know we want to work on, we create the program to complement that piece," says Yun. When asked if they had a favorite piece that they performed, Trynchuk responded, "The piece I am working on becomes my favorite. I like it that way."

1 Leonard Bernstein, "Young People's Concert: What is Sonata Form?" Script available at leonardbernstein.com



Diversity in Psychology and Art

Lanterns hang like jellyfish from wires strung across the narrow street. The watercolor painting captures the almost transparent quality of the papery orbs and the dense, white smog of San Francisco. On either side of the street, oriental shops raise an eclectic mix of Victorian and pagoda roofs toward the unseen sky.¹

John Salminen, the watercolorist who painted “Grant Lanterns,” figured he could usually predict the places on the painting where people would look. The lanterns, of course, would be one of the main focus areas. After all, they are right in the center, the dark circles a stark contrast to the smoggy sky.

Herb Helm, professor of psychology and amateur watercolorist, wanted to find out if Salminen’s predictions would prove correct. Karl Bailey, professor of psychology, worked with Helm on the project, running eye-

tracking tests to see where viewers actually focused their attention.

While Salminen “was fairly good at knowing where people would look,” they discovered that viewers often focused more on a small blob of bright red on the left than they did on the lanterns. The small area has no definite shape and is the only bright color in a dark mass of storefronts. “No one predicted people would look at these small, but contrasting, elements,” says Helm.

Helm became interested in the psychology of art while taking watercolor classes, a hobby he picked up in his mid-40s. “When you take classes with watercolorists, they give you advice on technique and composition. They tell you that you should lead a person through a painting: so one element should lead to another and so on to the element that you want to highlight, where you want people to focus. And I would sit there and think, that

ABOVE: “On the Go” is based on a photo Helm took of downtown Chicago. He says, “it looked like a hotel had just let people out and basically everyone on the sidewalk has some type of suitcase or backpack.”

makes sense, but how do you really know?”

Helm decided to involve Karl Bailey, who has expertise in eye-tracking, to find the answer. “There are a few articles like this out there,” Helm admits, “but they mostly use the artwork of deceased artists. How do you know what the dead artist wanted you to look at?” Instead, Helm used the work of John Salminen, a watercolorist whose workshop he was attending.

Salminen, “who is probably one of the most awarded watercolorist in the United States,” agreed to allow his paintings to be used and predicted where he thought viewers would look. Helm also used the paintings of a local artist, from whom he was also taking classes, as well of some of his own artwork.

RIGHT: This image, named “cta,” was inspired by a workshop taken from artist John Salminen. As a result of admiring Salminen’s complex urban paintings, Helm went to Chicago and took a number of photos of various scenes that caught his attention and then painted them.

After nearly four years of research and writing, Helm and Bailey published their findings in *Watercolor Magazine*.² They are still working with students to analyze the data they gathered, but with different foci.

Helm’s interests in psychology and art are not usually so closely linked. Helm has done research on “everything from assessment instruments, to the psychology of religion, risk behavior, and art.” Some people might call that “being all over the place;” however, Helm prefers to call it “diversity.”

“I think that one of the things that keeps me more interested” in research “is if there is a lot of diversity to what I am doing. A lot of people get their research program going and then integrate students. But I also like the diversity of ideas that students come up with,” he says.

Helm frequently engages with students in collaborative research projects. Several years ago, while Helm was working on curriculum changes for the psychology program, he asked professors from competitive research universities what it would take for an Andrews University student to be accepted into their school. “One answer I got over and over was ‘Research, research, research,’” remembers Helm. Another common answer was that professors looked favorably on students who had experience in their field.

Helm worked with Duane McBride, research professor of sociology, over the course of a decade to develop a more research-intensive curriculum. At the suggestion of Derrick Proctor, emeritus professor of psychology, Helm and Proctor began taking students down to the Midwestern Psychological Association held annually in Chicago. The department later developed a research class that climaxed in the conference and encouraged students to present their research.



Herb Helm



“Students often feel that they aren’t understanding the material when they take the class, but when they go to the convention, they are able to analyze the research that is being presented. By presenting their own research and analyzing other presentations, they became more confident about what they were doing and that confidence spreads to the other students,” says Helm.

In the research classes, Andrews’ psychology students are required to create a research project and then execute all the various research activities. Several alums have related that they seemed better prepared than students who attended large research universities, where students only participate in a small part of a project. Because of the smaller student-teacher ratio at Andrews, students are also more likely to be able to publish an article in a refereed journal. Helm recently co-authored an article with students Adam LaFave and Omar Gomez that was published in the *Journal of Research on Christian Education*.³

During his free time, Helm paints. “I’ve always liked the transparency and luminosity of watercolor,” Helm says, “so I just started taking a class here or there.” Eventually, Helm started taking classes with some of the top watercolorists in the United States, such as John Salminen.

At first, Helm liked the workshops he attended to be like his research projects: diverse. Rather than focusing on artists with the same style, he attended workshops from

artists with completely different styles. “The downside was that there wasn’t the consistent element of learning from one person,” he admits. “But the upside was that I took workshops from artists who said that I couldn’t do something with the paint or composition, and then I would take a workshop from someone else who said I could.”

Helm now focuses on a few key artists when taking workshops. His style is defined by an intensity of colors, rather than a specific technique. He has submitted his work to local and national art competitions and his artwork has been accepted into a number of Michigan traveling shows. Helm has also won a number of awards and sold several paintings.

Helm appreciates watercolor in part because of its diversity. “In watercolor, things don’t always go the way you want them to, whereas if I’m working with oil and acrylic, I can just paint over what I don’t like. In watercolor, I often create a picture and have to keep recreating it as I go.” This unpredictability is not limited to Helm’s watercolor paintings. In both his psychology and his art, unexpected variables affect the outcome. Helm is not perturbed; diversity is his style.

- 1 <http://johnsalminen.com/product/grant-lanterns/>
- 2 H.W. Helm Jr. and K.G.D. Bailey. “An eye for design.” *Watercolor Artist*, xx, 46–55, Oct 2015
- 3 Adam D. LaFave, Herbert W. Helm Jr., and Omar Gomez, *Journal of Research on Christian Education*, 23(3), 283–293, 2014

Pursuing Truth with Documentary Film

The film opens to a black screen with the sound of children laughing. The words “Kill the Indian, Save the Man,” a quote by Captain Richard Pratt (1892), referring to the education of Native Americans, appear on the screen.

The words fade as a voice prompts, “Just tell it like it is,” and vice-principal Jovannah Poor Bear-Adams begins telling the story of the Holbrook Indian School. The black screen gives way to a time lapse of the Arizona expanse as she speaks. “Our school is not about killing the Indian,” she says emphatically. “It is not about killing what is native in the kids. It is about healing them.”

Behind the camera, as the director of photography and location producer, is Paul Kim, associate professor of documentary film. In 2014, Kim worked with Terry Benedict, a well-known filmmaker, to make the film about Holbrook, a Seventh-day Adventist 1st through 12th grade boarding school located

in Holbrook, Arizona. The film is more than a promotional piece, says Kim, it is a partnership with the school and the film’s principal subjects, Jovannah Poor Bear-Adams and two Holbrook students.

Paul Kim’s own story is one of truth searching and a love for the visual image. Before he began his career as a filmmaker, Kim was a physical therapist and later worked in pastoral ministry. During his time working as a pastor, he was “overwhelmed with how much pop culture” was part of the “everyday vocabulary and influence” of the young people with whom he spent his time.

Kim believed that understanding the nature of film, as a practitioner, would help him comprehend its influence as a visual medium and returned to the classroom to complete a BA and MFA in documentary film. “As a film student, you are required to study it as a discipline and to read all the body of literature behind it. You study it intellectually and critically, but also explore

all the decision making processes of creating narrative in digital media,” he says.

Kim completed his studies with a new perspective on film. “I think of my work as cultural work. That’s a privileged place to be.” Kim describes his work, both in his previous career as a pastor and his current work in documentary film, as “a pursuit of truth.” “There are higher concepts in film and film history that portray film as truth or film as a way to discovering truth,” he says.

The pursuit of truth, desire to help bring about change, and interest in political and social issues attracted Kim to non-fiction and documentary film. “Documentary film has always been about social engagement and, in some ways, social activism,” he notes. “Documentary filmmakers make films not only because we love creating films and telling stories, but also because we believe that sharing stories about marginalized communities is really important to having a functioning democracy and healthy society.”

“I think part of the reason we struggle so much with ethnic violence is because we don’t understand the ‘other.’ When you really understand someone, you approach and engage them in a different way. That’s what character-based storytelling is all about.”

BELOW: Paul Kim (seated middle) directs documentary film students during a shoot



As a filmmaker, Kim constantly asks the question: “Whose story are we telling and how do we tell it legitimately?”

In his work as a professor and filmmaker, Kim aims to help his students understand that film is more than just a form of creative exploration. “I want people to understand that film can dovetail with different disciplines, and that the social implications of filmmaking can fit closely with the mission of this university,” he says.

“I would like for people to think about film as much more than just an escape mechanism. The fact that you can profit so heavily from film has made it a commodity, but in an institution of higher education, we should think of film as part of our culture, something we explore as we do the literary classics.”

However, Kim clarifies, thinking about film as a cultural work does not mean we should be uncritical viewers. “The notion that documentary film is or should be purely objective needs to be continually disabused,” he says. “We cannot choose when to turn the camera on or off without having a subjective element. Audiences should not watch a film believing that it is under the guise of some objective material. It has a point of view, and that is a point of view shared between the subject and, more tangibly, the filmmaker.”

Being part of a media literate society requires the viewer to responsibly engage with film, especially documentary films, which claim to portray actual people and events. As a filmmaker, Kim constantly asks the question: “Whose story are we telling

and how do we tell it legitimately?”

Sometimes the “stories” Kim films fall under categories other than documentary

film. In 2015, Kim served as lead producer of all television and media operations at the General Conference Session of Seventh-day Adventists in San Antonio, Texas. Kim also assisted Scott Grady, executive producer of the Audiovisual and Broadcasting Committee.

A highly complex event, Kim was responsible for capturing important moments for the world church as they unfolded. His primary concern while filming the General Conference was transparency. “The moment I am proudest of was getting the actual tallying of the [ordination] vote broadcasted and recorded,” he says, so that people could view the voting process from beginning to end.

Since the General Conference, Kim has worked on several film projects, including a tribute to Niels-Erik Andreassen, titled “A Life of the Mind.” In it, he masterfully captures Andreassen as an educator near the end of his career reflecting on his early dreams to become a teacher and the realization of those dreams. The film, which was a “very personal one,” became “a project of passion” for Kim and is now in the film festival circuit.

“Many of the best projects begin as projects of passion in places where you have local access,” Kim says. Those are the kinds of films Kim enjoys working on, projects that originate organically from established relationships in the community. “As a filmmaker, you have to figure out what kind of filmmaker you are and what kinds of projects fit.”

For Kim, “the right fit” might be something like a longitudinal film on a local story, perhaps about the Southwest Michigan agricultural community or migrant workers. He hopes that by showing the “complexities of someone’s life and situation” over a long period of time he, as a filmmaker, can convey the truth of who they are and the meaning of their experience. As he recently told a student, no filmmaker in the world can have more perspective and intimacy with a subject than the one who is already right there, living alongside them.

Reimagining Race in Renaissance Literature

In the 2014 podcast, “Serial,” journalist Sarah Koenig investigated the supposed involvement of Adnan Syed in the 1999 murder of his ex-girlfriend, Hae Min Lee. In the introduction of the show, Koenig remarked, “On paper, the case was like a Shakespearean mash-up. Young lovers from different worlds, thwarting their families, secret assignations, jealousy, suspicion and honor besmirched. The villain not a Moor exactly, but a Muslim all the same. And a final act of murderous revenge.”¹

For most listeners, that statement is just another reason to keep listening to the story, but for Vanessa Corredera, assistant professor of English, it is an example of how pop culture reimagines Shakespeare as a way to discuss issues of race, gender and class. Koenig’s introduction references both “Romeo and Juliet” and “Othello” although, Corredera notes, she does it without naming the plays or characters.

“I’m really interested in popular culture,” says Corredera, enthusiastically. “And it’s wonderful when you can mix your hobbies, research and teaching.” When she first listened to “Serial,” she saw a way to maximize her time and interests.

Corredera developed that single reference to Shakespeare “into a reading of race, ‘Serial’ and Shakespeare and what that means for the field of Shakespearean studies,” and presented it at a seminar on Early Modern Race/Ethnic/Diaspora Studies at the Shakespeare Association of America in 2015. The same paper was chosen to be part of a special edition of *Shakespeare Quarterly*, one of the preeminent journals in the field, on Shakespeare and race (forthcoming).

“Shakespeare and race studies emerged in the 1980s and 1990s as a part of a larger movement in literary studies towards thinking about women’s and postcolonial issues and critical race theory,” explains Corredera. “A lot of the early work on Renaissance literature and race was conducted on how race was constructed in the period by looking at primary sources to determine how Jews, Moors



Paul Kim

or other figures of alterity are portrayed. Researchers also looked at how those issues intersect with things like class, gender and beauty..”

Three main streams of thought have developed regarding discussions of race and the early modern period. The first group, Corredera says, believes scholars can legitimately talk about race during that period. “Obviously there is interest in skin color, what we would call ethnicity, regional difference and religious difference (such as in Shakespeare’s ‘The Merchant of Venice’). The language used and attitudes taken are about something equivalent to race, differences that are categorical and cannot be changed.”

“But,” she continues, “other scholars say we cannot discuss race because it is something we now describe as being biological; there was no concept of biology at that time. They also say that ‘race’ during the early modern period referred to familial relations.” A third category of scholars warns against imposing “modern conceptions of racial difference, such as the emphasis on skin color, which is not only modern, but, to a certain degree, very American.”

Still, discussions of race and the early modern period continue. Among those scholars who have decided to move on from the debate, some focus on how “Renaissance literature illustrates or addresses the racial or ethnic issues of the time.” Others, such as Corredera, “look at the way that Shakespeare speaks to current racial issues.” Corredera, and scholars like her, examine “modern appropriations of Shakespeare, such as YouTube videos, film adaptations, modern theater performances, novel adaptations, art installations, etc.”

Inspired by the work of scholars Ayanna Thompson, Kim Hall and Peter Erickson and the conversations at the seminar on Shakespeare and race, Corredera has begun working on a book on modern representations of “Othello” from 1994–2014. “I chose 1994 as the inner parameter for my study because of the O.J. Simpson trial; it was not just about race relations, it was also about black masculinity. He was a charming, African-American football player in an interracial relationship; I would not be the first to make the connection between his case and ‘Othello,’” she says. In fact, the similarities were referenced in newspapers and newscasts during the trial.

LEFT: Vanessa Corredera in front of *The Globe* at the 2016 World Shakespeare Congress in Stratford-Upon-Avon and London

Corredera is using 2014, the date “Serial” was broadcast, as the outer parameter for her study. She plans to work chronologically through several versions of “Othello” as represented across different media, such as a young adult novel, a podcast, a film and a modern play adaptation.

“I want to analyze why ‘Othello’ appears in the various mediums, what ideas or issues about race and racial theory the texts are engaging,” Corredera says, “and why the authors/creators choose to work with Shakespeare.” She notes that “Shakespeare” is a loaded term that refers not only to all Shakespearean texts, but also to William Shakespeare the person, as well as “all our cultural ideas about Shakespeare as the great humanist, the universal Shakespeare and the genius Shakespeare.”

In light of this, Corredera asks, “What do these re-imaginings of ‘Othello’ tell us about how we imagine Shakespeare and how we imagine Shakespeare in relation to race? Does Shakespeare allow us to see different things about race that we otherwise wouldn’t? Is Shakespeare antagonistic to productive discussions about race and racial relations?” Corredera aims to answer these questions in

“Does Shakespeare allow us to see different things about race that we otherwise wouldn’t?”

her book, which she sees as being “particularly timely for the current American context.”

Corredera’s current research project is a slight departure from her doctoral work on “The Early Modern Face: Physiognomy On and Off the English Stage,” which she completed at Northwestern University (2012). However, the two projects are connected by the concept of otherness, whether it is described in facial features or race. “For my dissertation I looked at archives, primary material and physiognomic texts to examine what they said about the com-



plexion and the face and what that tells the reader about how they can interpret someone else’s nature and character,” she explains.

The physiognomy research, Corredera clarifies, “is not a race project, it’s much broader. Race is part of the transactional social relationship context for physiognomy.” The concept of complexion and its representation, however, was a topic she explored in her dissertation, particularly with regard to Thomas Dekker’s drama “Lust’s Dominion.” The overlap between the two projects lies in questions about conceptions of the other. Both projects, Corredera says, analyze “social relationships and how they appear in literature” as well as the “intersection between race and gender in literature.”

Corredera has recently published revised chapters of her dissertation as a chapter in James A. Knapp’s 2015 “Shakespeare and the Power of the Face” titled, “Complex Complexions: The Facial Signification of the Black Other in ‘Lust’s Dominion’” (Ashgate), and as an article, “Faces and Figures of Fortune: Astrological Physiognomy in ‘Tamburlaine Part 1,’” in the Winter 2015 issue of “Early Modern Literary Studies.”

“The broad research interests” of how race, gender and social relationships are represented in literature “span across all my projects,” Corredera muses, “but they are manifested differently depending on the method, texts and theoretical frame. I think I’m still asking similar questions, just through different methods, with different texts and different foci.”

1 Sarah Koenig, “The Alibi,” Serial, podcast audio, October 3, 2014, <https://serialpodcast.org/season-one/1/the-alibi>



Undergraduate Research Mentor Award

The Undergraduate Research Mentor Award, established by the College of Arts & Sciences (CAS) in 2015, recognizes faculty members who have dedicated time and effort to mentoring undergraduate students in research both in and outside of the classroom. Students mentored by these faculty members have given presentations at regional or national conventions and/or had their research published in peer-reviewed venues. The award is part of a University-wide initiative to recognize and encourage excellence in undergraduate research.

Recipients chosen from each of the three CAS divisions are recognized during the April Student Awards Recognition Assembly. The first awards, given in 2015, went to Lilianne Doukhan, associate professor of music and French (Humanities Division); Karl Bailey, associate professor of psychology (Social Sciences Division); and James Hayward, research professor of biology (STEM Division).

The second annual Undergraduate Research Mentor awards were given out on April 19, 2016 to **L. Monique Pittman**, professor of English and director of the J.N. Andrews Honors Program (Humanities Division); **Harvey Burnett**, associate professor of psychology and chair of the Department of Behavioral Sciences (Social Sciences Division); and **Ryan Hayes**, associate professor of chemistry (STEM Division).

L. Monique Pittman has made a lasting impact on many Honors and English students. Alaryss Bosco says, “Dr. L. Monique Pittman has been an exceptional research mentor. Since my project’s infancy she has guided and encouraged me every step of the way. Her supreme organizational skills have been an inspiration and have kept me on track through the project. It has been a privilege to work with a leading expert in the field of Shakespeare studies.”

Charles Abreu, one of several students under Burnett’s mentorship, said this about his professor: “Dr. Burnett first mentored me in Research Methods IV, where he taught survey research methods, and oversaw my first official research project in my 2nd year. His wisdom and guidance enabled me to present the findings from that first project at a major conference. His teaching sparked my personal interest in research and has enabled me to go on to present three more projects at various conferences in Chicago this May.”

Ryan Hayes, whose research is featured in this brochure, has mentored many undergraduate students over the years. Zachary Reichert, a 2016 graduate, has worked with Hayes for the majority of his experience as an undergraduate. “As I have worked for Dr. Hayes, I have been particularly inspired by his enthusiasm as a teacher and researcher. However, his mentorship has provided me with more than inspiration. Throughout my time in Dr. Hayes’ lab, he has presented me with a number of opportunities to share my research with audiences both on and off campus. This has provided me with the confidence to discuss my work and ideas with others and has also given me an opportunity to deeply think about and synthesize the work that I have done. He has also provided me with a good amount of independence, allowing me to critically think about problems on my own while additionally offering important help and mentorship when needed.”

SIEGFRIED H. HORN EXCELLENCE IN RESEARCH AND CREATIVE SCHOLARSHIP AWARD RECIPIENTS 2016

The Siegfried H. Horn Excellence in Research & Creative Scholarship Award was established in 2011 in honor of biblical archaeologist Siegfried H. Horn. Horn served as the dean of the Seventh-day Adventist Theological Seminary, founded what is now the Siegfried H. Horn Archaeological Museum, directed the first Heshbon expeditions at Tall Hisban, Jordan, and established the journal “Andrews University Seminary Studies.” The award recognizes lifetime achievement in research and creative scholarship among faculty members at Andrews University. One recipient is selected annually from each of four disciplinary areas based on their scholarly productivity over the previous five years, and the awards are presented at the annual faculty & staff awards ceremony in March.

The 2016 recipients of the Siegfried H. Horn Excellence in Research & Creative Scholarship award were Stephen Zork, associate professor of music, for Arts, Humanities and Education; Karl Bailey, professor of psychology, for Pure and Applied Sciences; Ann Gibson, professor emerita of accounting, for Professional Programs; and Richard Choi, professor of New Testament, for Religion and Theology.

Stephen Zork, conductor of the University Singers and University Chorale and director of choral studies, conducts concerts, gives lectures and performs all around the world. Under his leadership, the University Singers have recorded seven albums. **Karl Bailey** is a leader in mentoring student research and in religiosity research. His project on the internalization of Sabbath-keeping and wellbeing was featured in the 2015 edition of “Research and Creative Scholarship.” **Ann Gibson**, formerly professor of accounting and the Hasso Endowed Chair of Business Ethics, is a sought-after accounting lecturer among treasurers in the Adventist church. **Richard Choi**, chair of the Department of New Testament, has presented scholarly papers at major conventions and serves as the president of the Midwest Society of Biblical Literature, chair of the Regional Coordinators Committee for the Society of Biblical Literature, and executive secretary and coordinator of the Chicago Society of Biblical Literature.

LEFT TO RIGHT: Ann Gibson, Karl Bailey, Richard Choi, Stephen Zork





Exploring the Composition of the Pentateuch Conference

From April 3–5, 2016, the Siegfried H. Horn Lectureship Series hosted a conference organized by the student-led Torah Group. The Torah Group—which includes Old Testament PhD students Felipe Massotti, Kenneth Bergland, Scottie Baker and Rahel Shafer, assistant professor of religion & biblical languages—initially formed to provide a forum for discussing the Hebrew Bible.

With guidance from Old Testament professors Roy and Constance Gane, Richard Davidson and Jiří Moskala, and assistance from the Office of Research & Creative Scholarship the group began planning a conference on the composition of the Pentateuch. The conference featured respected scholars Richard E. Averbeck (Trinity Evangelical Divinity School), John Bergsma (Franciscan University of Steubenville), Joshua Berman (Bar-Ilan University), Daniel I. Block (Wheaton College), Richard M. Davidson (Andrews University), Roy E. Gane (Andrews University), Duane A. Garrett (The Southern Baptist Theological Seminary), Richard S. Hess (Denver Seminary), James K. Hoffmeier (Trinity Evangelical Divinity School), Benjamin Kilchör (Staatsunabhängige Theologische Hochschule Basel), Gerald A. Klingbeil (Andrews University, Adventist Review), Michael LeFebvre (Christ Church Reformed Presbyterian) and Jiří Moskala (Andrews University), as well as other Andrews University faculty and PhD students.

Attendees came from across the United States to participate in the conference, which is the first of its kind to be held at Andrews University. The presenters addressed current issues in Pentateuchal studies, particularly arguments for Mosaic authorship as opposed to the commonly held Documentary Hypothesis.

Amanda McGuire-Moushon, a PhD candidate in Old Testament at Andrews University, remarked, “This event was an extremely valuable experience. The issues were addressed within a faith-based, scholarly framework that is not often seen in a conference like this with such well-known scholars.”

The Torah Group plans to organize a second conference in 2018. The results of this year’s conference will be published as an edited volume.

Third Annual Andrews Research Conference

Early career creative scholars and researchers in the arts and humanities gathered at Andrews University for the 3rd annual Andrews Research Conference, May 4–8, 2016. Presenters and attendees traveled from across the United States, Nigeria and Romania to participate in the conference.

The conference was sponsored by the North American Division Office of Strategic Planning and Assessment; the General Conference Office of Archives, Statistics, and Research; the Andrews University Office of Research & Creative Scholarship; and the Andrews University Departments of English, History & Political Science, International Languages & Global Studies, Music, and Visual Art, Communication & Design.

Plenary presentations were given by L. Monique Pittman, professor of English and director of the J. N. Andrews Honors Program, on the topic of “Color-Conscious Casting and Multicultural Britain in the BBC Henry V (2012): Historicizing Adaptation in an Age of Digital Placelessness” and David Trim, director of the General Conference Office of Archives, Statistics, and Research, on “America’s favourite sect? The afterlife of the Huguenots: in the visual arts, literature, drama, music, and the movies.”

On Thursday and Friday, participants gave oral presentations and lecture recitals, exhibited art, and showed an original film. Leisure activities began with a vespers on Friday evening, featuring local artist Nathan Greene. On Saturday afternoon, a group of attendees traveled to Battle Creek and enjoyed a tour of the Historic Adventist Village and Oak Hill Cemetery before returning for vespers, featuring then-provost, now president, Andrea Luxton.

Francisco Burgos, associate professor of English & foreign languages at Oakland University, expressed his appreciation for the conference. “The format of the conference was excellent. I could see total respect

for each and every one of the speakers and the studies presented; the organization was impressive; and I was able to learn many valuable lessons from all my colleagues,” he said.

Michael Weismeyer, a PhD candidate in the Department of History at the University of California, Los Angeles, remarked that, “The Andrews Research Conference was a great experience. Coming from a non-Adventist university, it was rewarding to be able to interact with other Adventist scholars from a variety of disciplines.”

“The 2016 Andrews Researchers [sic] Conference for me was a delightful experience filled with experiential and empirical details. This is what research is supposed to be about; the easy atmosphere and warmth that attended every presentation makes me want to attend the next conference,” said Johnson Babefemi Akintayo, a lecturer in the Department of Mass Communication at Babcock University in Nigeria.

The fourth annual Andrews Research Conference will be held from May 17–21, 2017. The conference will return to the first theme of its three-year cycle: early career researchers in STEM. Adventist undergraduate students (advanced), graduate students, post-docs and early career faculty in STEM are invited to present. More information can be found at andrews.edu/research/arc.

*Debbie Michel,
“Lake Union Herald”
managing editor,
presents at the
conference.*



Projects supported by the Office of Research & Creative Scholarship, 2015–2016

Faculty Research Grants: 2015–2016

Erich Baumgartner (Leadership), *The Changing Role of Church Planters in the Life Cycle of a New Church Plant*

Skip Bell (Church Ministry), *Christ in the City: Incarnational Ministries that Transform Lives and Grow the Church*

Petr Cincala (World Mission), *John Matthews* (Discipleship & Religious Education), **Kathleen Beagles** (Discipleship & Religious Education), **Peter Swanson** (Christian Ministry) and **René Drumm** (Behavioral Sciences), *Identifying Components of Effective Pastor Training: A 10-year Review of Student Input*

Ivan Davis (English), *Fred Newton Scott and Journalism Training at the University of Michigan*

Kari Friestad (Visual Art, Communication & Design), *Exhibition and Studio Work Plan (2015–2016)*

Daniel Gonzalez-Socoloske (Biology), *Characterization of manatee habitat and its use with side-scan sonar in Isla de La Juventud, Cuba*

Thomas Goodwin (Biology), *Distribution and paleobiology of hibernation in fossil ground-dwelling squirrels from the Meade Basin, SW Kansas, USA*

James Hayward (Biology) and **Shandelle Henson** (Mathematics), *Comparison of Surface Patterns on Cannibalized and Noncannibalized Gull Eggs*

Lori Imasiku (Teaching, Learning & Curriculum), *Voices from the multigrade classroom: Zambian community schools*

Jimmy Kijai (Graduate Psychology & Counseling) and **LeRoy Ruhupatty** (Accounting, Economics & Finance), *Student engagement and its relationship to development of values, religious commitment and community services at selected Adventist colleges/universities in the Southern Asia Pacific region*

Hyun Kwon and **Rodney Summerscales** (Engineering & Computer Science), *Paper biosensors and mobile apps for affordable detection of cancer biomarkers*

Kanya Long (Biology), *Complementary local and international research opportunities for undergraduates in the Arbovirus Ecology Laboratory*

Peter Lyons (Biology), *Structure and function of carboxypeptidase O*

Robson Marinho (Leadership), *Practical Application of Kolb's Experiential Learning Cycle to Professional Development as Perceived by the Participants of Leadership Development Programs in Cross-Cultural Settings*

Desmond Murray (Chemistry & Biochemistry) and **Kanya Long** (Biology), *Hybrid Heterocyclic Boronic Acids as Potential Inhibitors against Alphaviruses*

Benjamin Navia and **John Stout** (Biology), *The effect of model calls with varying sound intensities and multiple frequencies in the phonotactic selectivity and its neural correlates in female crickets*

Boon-Chai Ng (Engineering & Computer Science), *Creating and Testing Anodized Aluminum for potential application as an interposer in the test socket industry*

Joel Raveloharimisy and **Arian Timoti** (Behavioral Sciences), *Understanding Poverty in Madagascar*

Rhonda Root, **Robin Johnson** and **Ariel Solis** (Architecture), *Cavan Burren Research Project, Republic of Ireland*

Felipe Tan and **Jim Ford** (James White Library), *Subject Analysis of the Books in Ellen G. White's Private and Office Libraries*

Shannon Trecartin (Social Work), *Examining the Factor Structure of the Latent Construct "Physical Home Environment" using the National Health and Aging Trends Study*

Randy Younker (Institute of Archaeology), *A book on the Archaeology and History of Salemi, Sicily*

Robert Zdor (Biology), *Cloning & Sequencing of Weed Deleterious Rhizobacterial Genomic Sequences Associated with Production of the Plant Hormone Auxin*

Faculty Research Grant Renewals: 2015–2016

Lisa Ahlberg (Chemistry & Biochemistry), *Investigation of 1,3-Dipolar Cycloaddition Mechanisms: Synthesis of Thiolactamycin and Derivatives*

Stanley Beikmann (Agriculture), *Using What JFS Archaeology has Learned—for Education and Conservation of Plants, Water and Soil*

Larry Burton (Teaching, Learning & Curriculum), *Denominational Persistence and Denominational Exit Among Adventist University Alumni*

Greg Constantine (Visual Art, Communication & Design), *Creation and Exhibition of "Poetic Licenses"*

Kenley Hall and **Joseph Kidder** (Christian Ministry), *Pilot Case Studies of NAD Churches who are Attracting and Keeping Young Adults (18–30)*

Ryan Hayes (Chemistry & Biochemistry), *Structure Identification and Toxicity Assessment of an Arginine-based Heterocyclic Amine*

Kenneth Logan (Music), *Documentation of William Huber Jr. Collection at The Library of Congress and Its Namesake; Musical Composition Fostering and Efficiency Project*

David Mbungu (Biology), *Modulation of Phonotaxis by Monoamines*

Getahun Merga (Chemistry & Biochemistry), *Synthesis and Characterization of Conjugated Gold and Silver Nanoparticles with Sulfur Containing Amino Acids*

Nicholas Miller (Church History), *The Religious Roots of the Civil War: Slavery, Judgment, and the Moral Government of God*

Marlene Murray (Biology), *The Effects of Omega-3-Fatty Acids on Intracellular myo-Inositol*

David Nowack (Chemistry & Biochemistry), *Preliminary investigation into the relationship between dendrimer structure and enzyme activity*

David Randall (Chemistry & Biochemistry), *Development and use of NO chemical sensor*

Denise Smith (Biology), *The Role of the Oncogene HER2/neu in breast cancer and potential therapeutic screening*

Chi Yong Yun (Music), *Johann Samuel Schroeter Piano Concertos*

2015–2016 Undergraduate Research Scholars

Charles Abreu (Karl Bailey, Behavioral Sciences), *Cluster analysis of eye movement patterns and degrees of belief*

Will Allen (Boon-Chai Ng, Engineering & Computer Science), *Creating and Testing Anodized Aluminum for potential application as an interposer in the test socket industry*

Christiana Atkins (Harvey Burnett, Behavioral Sciences), *Moral Reasoning and Judgments about Ending Life Revisited: The Influences of Education, Spirituality and Resilience*

Kaydra Bailey (Desmond Murray, Chemistry & Biochemistry), *Liquid Crystalline Rhodanines as Biological Stains*

Christian Bardan (Peter Lyons, Biology), *Analysis of mammalian carboxypeptidase O expression patterns*

Alaryss Bosco (Monique Pittman, English), *A Machiavellian Framing of Power Dynamics in Shakespeare's Henry V as adapted by Olivier, Branagh, and the BBC's Hollow Crown*

Noah Chun (Getahun Merga, Chemistry & Biochemistry), *Characterization of naked noble metal nanoparticles before and after binding them to specific organic molecules and biomolecules*

Saharsh Dass (Shandelle Henson, Mathematics), *Mathematical Models of Animal Behavior*

Jonathan Doram (Anneris Coria-Navia, Teaching, Learning & Curriculum), *Surviving or Thriving: A Mixed Methods Case Study Investigating the Impact of Racial and Ethnic Diversity on Student Levels of Thriving in a Choral Classroom*

Hazel Ezeribe (Peter Lyons, Biology), *An analysis of carboxypeptidase folding mechanisms*

Josias Flores (Romulus Chelbegean, Religion & Biblical Languages), *Being a Pastor's Husband*

Amante Gonzalez (Romulus Chelbegean, Religion & Biblical Languages), *Being a Pastor's Husband*

Noel Harris (Joel Raveloharimisy, Behavioral Sciences), *Using Theories of Change for the Education of Social Responsibility: A Theoretical Framework*

Cooper Hodges (Duane McBride, Behavioral Sciences), *Religiosity & Perceived Stress Among College Students*

Bomi Kim (Darah Regal, Speech-Language Pathology & Audiology), *Auditory Memory and Figure-Ground Ability Among University ESL Students: A Comparative Study*

Shanelle Kim (Monique Pittman, English), *Religion, Morality, and Gender in Ben Johnson's Volpone*

Jeong Bin Lee (Benjamin Navia, Biology), *L3 auditory interneuron responses to dual-frequency calling songs in female crickets (Acheta domestica)*

Julie Logan (Yun Myung Oh, Mathematics), *A characterization of sphere curves: Summary and new*

Bernardo Martinez (Rodney Summerscales, Engineering & Computer Science), *Providing immersive virtual reality walkthroughs of large, architect-designed buildings*

Hannah Mbungu (Sherine Brown-Fraser, Public Health, Nutrition & Wellness), *The Effects of Preservation Techniques on Nutrient Quality in Selected Foods Using a Refractometer*

Karla Mulzac (Benjamin Navia, Biology), *The effect of dual frequency calls in the phonotactic response of female cricket Acheta domestica*

Rufaro Musvosvi (Hyun Kwon, Engineering & Computer Science), *Matlab Gui application for Optical trapping*

Fonda Mwangi (Rachel Williams-Smith, Visual Art, Communication & Design), *From Good to Great-An Action Research study to Improve the New Faculty Onboarding Experience*

Candace Neufville (Darah Regal, Speech-Language Pathology & Audiology), *Auditory Memory and Figure-Ground Ability Among University ESL Students: A Comparative Study*

Michael Plantak (Ryan Hayes, Chemistry & Biochemistry), *Ames Test Optimization for Evaluating Mutagenicity of Arginine-Based Heterocyclic Amines*

Zachary Reichert (John Stout, Biology), *The effect of model calls with varying sound intensities and multiple frequencies in the phonotactic selectivity and its neural correlates in female crickets*

Zachary Reichert (Ryan Hayes, Chemistry & Biochemistry), *Structure Identification of Mutagenic Arginine-Based Heterocyclic Amines*

Timothy Robertson (Joon Kang, Mathematics), *Sufficient conditions for the uniqueness of positive solutions to an elliptic model*

Elmany Saint-Fleur (Garth Woodruff, Agriculture), *Sustainable Agriculture*

Randy Sanchez (Thomas Goodwin, Biology), *Distribution and paleobiology of hibernation in fossil ground-dwelling squirrels from the Great Plains*

Heaven Shin (Hyun Kwon, Engineering & Computer Science), *Paper biosensor design and test*

Connor Smith (Garth Woodruff, Agriculture), *Identifying and Preserving Endangered Plants in Tall Hishbon, Jordan*

Rashida Smith (James Hayward, Biology), *Measuring the effects of sea surface temperature on seabird cannibalism in the Salish Sea*

Christa Spieth (Boon-Chai Ng, Engineering & Computer Science), *Testing anodized aluminum for potential application as an interposer in the test socket industry*

Gabriel Stanier (Ryan Hayes, Chemistry & Biochemistry), *Isolation and detection of Arginine-based HCA in Complex Plant Proteins*

Krystal Uzuegbu (Lionel Matthews, Behavioral Sciences), *Psycho-social, Religious, and Socio-demographic Predictors of Racial Attitude in a Selected Group of Americans*

Zachary Verhelle (Hyun Kwon, Engineering & Computer Science), *Electrochemical paper biosensor development*

Chrystal Wedderburn (Øystein LaBianca, Behavioral Sciences), *Survey of Habitation Caves in Jordan*

Hyelin You (David Nowack, Chemistry & Biochemistry), *Stabilization of Aqueous Ascorbic Acid Solutions using PAMAM Dendrimers*

Dillon Zimmerman (Getahun Merga, Chemistry & Biochemistry), *Arylidene Barbiturates as Potential Bifunction Nanoparticle Linkers*

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These Honors students were part of the group of 50 presenters at the Honors Scholars and Undergraduate Research Poster Symposium, held February 26, 2016, in Buller Hall. The research posters covered a diverse range of topics, including "Race Representatives: Why Black Members of Congress Matter," "Procrastination, Motivation & Flow" and "The Effect of Degrading the Transcription Factor NF- κ B Subunit Proteins on NF- κ B's Oncological Activity."



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