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The third gender
Female Marines reach across cultural boundaries in Afghanistan

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The third gender

Photojournalist Rebecca Sell follows a team of female Marines trying to make connections with the women and children of Afghanistan.
A promising gift

As Perspectives magazine went to press last spring, Ohio University received news of a historic gift to our medical school that will strengthen our ability to make a major contribution to public health and wellness.

The $105 million gift from The Osteopathic Heritage Foundations will enhance our efforts to educate primary care physicians and advance research on diabetes and musculoskeletal disorders and diseases. In recognition of the award, the largest single private donation ever given to a college or university in Ohio and the fifth largest gift given to any medical school, the medical school has been renamed the Ohio University Heritage College of Osteopathic Medicine.

To help address a projected primary care physician shortage in the United States, the college plans to use part of the gift to expand its class size and build a regional extension campus in central Ohio. The new campus is slated to take its first incoming class by August 2014 and is expected to enroll 50 new students each year.

The gift also will help expand research and treatment of diabetes, a disease expected to increase in the United States by 165 percent by 2050, eventually affecting one in three Americans. Appalachian Ohio has the highest incidence of diabetes, obesity, and related metabolic diseases in the state (11.3 percent), and rates that are much higher than the national average (7.5 percent).

To support diabetes research, the college plans to build a new Diabetes/Endocrine Clinical Treatment Research Center on the Athens campus, which will attract prominent researchers.

Part of the Osteopathic Heritage Foundations award will help fund a new research facility for the Ohio Musculoskeletal and Neurological Institute (OMNI), which was featured in our Spring/Summer 2011 issue of Perspectives.

The institute is focused on research on musculoskeletal disorders and diseases, which are the leading cause of disability in the United States. For more than a quarter of a century, physicians and scientists at Ohio University have worked together to conduct interdisciplinary research into these conditions, making it one of the longest running research entities in the medical college.

This gift has tremendous synergies with other major Ohio University efforts to advance health and wellness, such as our establishment of a Health Sciences Center that will unite activities in our medical college, the College of Health Sciences and Professions, and other health-related departments and programs.

In 2010, the university opened the Osteopathic Heritage Foundations and Charles R. and Marilyn Y. Stuckey Academic & Research Center, a facility for research and learning shared by the Heritage College of Osteopathic Medicine and the Russ College of Engineering and Technology.

In addition, the research initiatives supported by the gift will complement our plans to recruit distinguished faculty members and graduate students to conduct translational medical research at the Edison Biotechnology Institute. The latter effort is funded by royalty income generated from a license to the Pfizer corporation for a growth hormone antagonist discovered by Ohio University Goll Eminent Scholar John Kopchick and former graduate student Won Chen.

We are grateful to the Osteopathic Heritage Foundations for their commitment, which will dramatically broaden our ability to improve the human condition of the people of Ohio.

About Perspectives

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ILLUSTRATION: CHRISTINA ULLMAN
Small steps
Hyun-Ju Oh works to improve fitness levels of Appalachian kids

When Hyun-Ju Oh moved to Ohio, she was surprised to learn that the state ranked high nationally for childhood obesity. Oh, an assistant professor of recreation and sport pedagogy, wondered how K-12 physical education classes could address the problem.

Based on her experience documenting the nutrition status and physical activity of Mexican and Mexican-American youth in Utah, Oh launched a study of 152 kids in Appalachian Ohio to determine whether they were meeting national standards for fitness. The subjects, whose average age was 14, wore a pedometer for 7 days to track their activity. The study differed from previous research, which either relied on self-reported data or examined only adults in the region, she says.

Most of the kids didn't meet the currently recommended physical activity amounts (a minimum of 60 minutes per day), although the boys in the study were more active than the girls. Oh suggests that poverty and the region's rural geography—which makes it difficult for kids to walk or find access to public parks—are some of the key culprits.

Oh now is recruiting up to 200 Ohio kids to keep track of their activity on a daily log that features images of various forms of recreation or rest. Completed through the physical education class, the intervention is intended to inform students about basic ways they could increase their level of fitness during their everyday routine.

“We're trying to do something very simple that can be done right away,” says Oh, whose research has been funded by the Ohio University Research Committee. “It's not that expensive or time-consuming.”

Oh's own college students, the next generation of K-12 physical education teachers, already use the tool in her classes. In addition, the researcher is exploring the feasibility of offering the schools software that could analyze student activity data and demonstrate their progress in becoming fitter kids.

Oh is committed to finding ways to stem the rising levels of obesity at a time when more school districts are eliminating physical education classes for budget reasons.

“I’d like to provide evidence to policy makers that P.E. class should be brought back,” she says.
Danilo Cortes, a Chilean graduate student in film, created a documentary, *Forbidden*, to explore the historical and social issues surrounding the country’s abortion policy. He examines the social attitude of Chileans toward women’s right to choose and provides case studies of individuals whose lives have been impacted by the prohibition of abortion.

Abortion was not always illegal in the predominantly Catholic country. From 1931 to 1989, women experiencing life-threatening pregnancy complications could receive one. Abortion was not illegal until a more conservative, militant dictatorship took power, he says.

When Cortes began the documentary, he found that most Chileans knew little about the topic. He hopes the film will help raise awareness and generate discussion. Cortes finds it important to remain objective and present both sides of the debate.

“The topic of abortion is one of the most complex ethical issues for human beings. If I get too involved, I won’t be able to make a rational argument. I would rather guide the discussion than take a stance,” says Cortes, whose project was funded by an Ohio University Student Enhancement Award.

Cortes interviewed a total of 15 women, seven of whom he featured in the documentary. Depending on whether the women interviewed had their abortions during the legal or illegal period, some chose to reveal their identities on film while others did not. Most women who participated found it therapeutic to finally be able to tell their story, Cortes notes.

One woman Cortes interviewed was left by her boyfriend when he found out she was pregnant. She was too financially unstable to care for the child herself. Another had AIDS. One pregnancy resulted from rape.

In Chile, depending on the woman’s financial status, she may either seek out an abortion in another country, find a doctor willing to do the procedure, buy the morning-after pill plus another prescription for ulcer treatment that rids the uterus of the fetus, or do it herself. There are risks involved with every decision.

Cortes plans to enter his documentary in American film festivals, but his primary focus is on showing the film in Chile. He has edited two versions of the film for these separate audiences, with the American version providing more context on the culture and politics of Chile.

Some older Chilean citizens who lived through the period in which abortion was legal in certain circumstances tend to view the procedure as a valid option if the woman’s life is in danger, Cortes notes. The general population tends to disapprove of abortion and wants to keep it illegal, however.

“A lot of people fear an eroding of the law,” Cortes says. “They believe that if they change this, it will lead to other things being changed.”

Chile is one of only a few countries in the world in which abortion is illegal under all circumstances. Any abortions performed are underground, and the issue is rarely debated or discussed. No one knows exactly how many women have received abortions, what exact methods are used, and what complications women may have endured.

OfNote | SEC .02 RESEARCH NEWS BRIEFS
:: FILM | by Milissa Hudepohl
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Destroying disease

Study finds that health campaigns are winning the battle against African river blindness

A native of Sudan, Tarig Higazi has seen the impact of river blindness up close. The tropical disease, transmitted by black flies that breed on the banks of fast-flowing rivers and streams, infects people with a parasite that can live in the body for 15 to 20 years. In the southern part of the country where the disease is more virulent, those afflicted may lose vision by age 40.

“How about 50 percent of the adults in a village may be blind,” he says. “They’re active but not productive.”

Higazi, an assistant professor of biological sciences at Ohio University’s Zanesville campus, has focused his career on examining river blindness in Sudan, where it can manifest as a vision or skin disease depending on the region. The World Health Organization (WHO) estimates that more than two million people are infected in the African nation. In 1998, WHO and the non-governmental organization The Carter Center began supporting measures to reduce the incidence of river blindness in the country. Individuals were given a pharmaceutical treatment, Mectizan, to kill the parasite larvae and stop transmission of the disease. The medicine, donated by the Merck corporation and distributed by local communities, must be taken over the course of 10 to 15 years to effectively control the condition.

New research published by Higazi and colleagues this year suggests that the long-term strategy has paid off. The team collected and tested 30,000 black flies in two regions in northern Sudan. They discovered that in Abu Hamed, transmission of river blindness has been suppressed significantly over the past decade. The scientists found an average of only 1 infected fly per 10,000.

“The amount of disease transmission we saw in the north is an indication that the disease is being eliminated,” Higazi says. “That’s something big.”

The study also examined the black fly population in Galabat in eastern Sudan, where only minor, largely undocumented medical treatment has occurred since 2007. Higazi and his team found a moderate transmission rate of the parasite in this area, about 7 infected flies per 10,000.

Galabat is near the border of Ethiopia, where river blindness also is pervasive. “There are no boundaries for disease—if you don’t treat it next door, it can spread again,” Higazi says of the need to expand treatment efforts.

If treatments continue for the next few years, there’s hope that WHO could declare the disease eliminated in northern Sudan, says Higazi, who collected new disease transmission data there this summer as a consultant with The Carter Center. That’s happened in several countries in South America, where a more benign version of the disease has been prevalent. The next challenge, Higazi notes, would be to tackle the problem in the southern region, which voted earlier this year to split from the north and establish itself as an independent nation.
To explain the physics of our universe, scientists developed what's known as the “Standard Model” of how subatomic particles and the forces of nature behave. Although the Standard Model has been successfully used in the field, physicists have learned that it doesn’t account for everything—for example, the existence of dark matter.

Ohio University physicist Julie Roche is part of a team of 150 scientists now embarking on a study that could either strengthen evidence for the Standard Model or reinforce the notion that there’s a whole world beyond it—a concept they call “new physics.”

The international team is attempting to make the first precision measurement of the proton’s weak charge, an experiment that uses the weak force to shed light on new physics. The weak force is one of the four fundamental forces of nature (the other three are the strong force, electromagnetism, and gravity).

To do this, the team needed to construct a special detector that measures the speed, direction, and energy of scattered electrons. The detector has been installed at the U.S. Department of Energy’s Jefferson Laboratory in Newport News, Virginia, considered to be the world’s most powerful “microscope” for studying the nucleus of the atom. The lab features an electron beam accelerator buried 25 feet underground. The accelerator can propel electrons around a racetrack, hitting targets in three different experimental halls so that physicists may observe different characteristics of particles and the forces that act on them.

The development of the detector took 10 years. Roche’s team contributed to the project by designing the data acquisition and analysis software. In 2010, the project, known as “QWEAK,” finally was ready for its launch.

“Despite all the tests and preparation one gets to do, nothing really prepares you,” says Roche, whose team now has completed its first year of a two-year data collection process.

Roche seems undaunted by the long development of the detector, noting that she’s just as intrigued by the creative process of designing innovative experiments as she is about what the research team may discover.

“We try to do smart experiments to measure new things, but the results are out of our hands—we don’t know what we’ll find,” notes Roche, an assistant professor of physics and astronomy.

The physicist is excited, however, to be part of an international team that could write a new chapter in physics. That’s not to say that Roche expects her work to reach a definitive ending.

“Each time you get an answer,” she says, “it opens up a new question.”

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*Scientists launch international experiment that could test standard model of physics theory*
Team player

Artificial neural network makes smart NFL draft picks

In the 2007 National Football League (NFL) draft, the Oakland Raiders selected one of the biggest draft busts of all time. Jamarcus Russell was picked first overall and signed to a $61 million contract. Three losing seasons later, the quarterback had been cut from the team. The wins the Raiders bet on evaporated just like the $32 million Russell had been guaranteed.

William Young says he could have saved them that money. Young, adjunct assistant professor of industrial and systems engineering at Ohio University, constructed an artificial neural network that showed Russell should have been selected ninth, not first, and clearly hired for a lot less. Entitled Heuristic Evaluation of Artificially Replaced Teammates, or HEART, his system “replaces” existing players on teams with prospective draftees and evaluates how many games a team could win if it drafted one player over another.

The algorithmic system, which was developed as Young’s doctoral dissertation at Ohio University, gets 30 to 40 percent of its data from the NFL combine events, such as the 40-yard dash or long and high jumps. Veteran players don’t have current combine stats, so Young forecasts their performance using on-the-field statistics.

Young’s model also can assess player personality attributes more impartially than people can, he says. It can help teams find players that suit their organization’s culture by converting attributes such as character traits, performance with teammates, or work ethic into numbers. The team will win.”

Protein sleuths

Analytical chemistry technique could help scientists select new drug candidates

Pharmaceutical companies are increasingly seeking to create protein-based drugs that are less toxic and more effective than conventional treatments. A new technique designed by Ohio University scientist Hao Chen could aid those drug development efforts.

Analytical chemists use a technique called mass spectrometry (MS) to determine the mass, structure, and composition of molecules. Chen pairs this traditional tool with electrochemistry (EC) using a technique called desorption electrospray ionization (DESI) to break apart the disulfide bonds of protein molecules to better understand their characteristics. This may be important for the synthesis of protein drugs, Chen says, as the molecule must have the right disulfide bond linkages to effectively function in the body.

One of DESI’s advantages, Chen says, is that it can directly analyze liquid samples without sample preparation. This could give it broader applications than the current technique commonly in use, electrospray ionization, which requires pretreatment of samples. The coupling of MS with EC by DESI (EC/DESI-MS) involves simpler instrumentation than conventional methods. Many biological molecules under study naturally occur in liquid form and are electrolytically active, explains Chen, who collaborates on the work with Ohio University Professor Howard Dewald and graduate student Yun Zhang.

The technique of EC/DESI-MS can be used for a wide range of studies, from small organic molecules to high-mass proteins. Compared to conventional methods, the technique can examine much larger, more complex molecules than ever before, Chen says.

Chen, who is funded by the National Science Foundation, has applied for a patent on the technique, and is looking for additional proteins to test. His goal is to make the EC/DESI-MS technique accessible to other scientists searching for a more efficient, cost-effective way to identify candidates for new drugs.
Fraternal filmmaking

Biography reveals Syd Chaplin’s role in early Hollywood

He starred in box office hits, conceived the idea for the original United Artists, and brokered lucrative film deals that made Charlie Chaplin famous.

Syd Chaplin may not be a household name today, but the brother of the high-profile actor made a notable mark during the golden era of Hollywood, according to a new book by Lisa Stein Haven, an assistant professor of English at Ohio University’s Zanesville campus.

“Syd wanted to be a film star, too, but he didn’t quite have the magic his brother did. And he knew that,” says Haven, the author of Syd Chaplin: A Biography.

Syd Chaplin did have a strong knack, however, for business. Haven describes him as a savvy entrepreneur always looking to make a good deal. “He got Charlie the first multimillion dollar contract in 1916,” she says. “That was really important—not only for Charlie, but for other actors, too.”

Appalled at the cheap rates that production companies offered actors, Syd Chaplin proposed creating the company United Artists. Launched in 1919 by Charlie Chaplin, D.W. Griffith, Douglas Fairbanks, and Mary Pickford, the company allowed actors to distribute their own films at more competitive pay. “It set in stone the huge salaries that stars still get today,” Haven says.

Though Syd Chaplin was the business whiz of the family, he also enjoyed a brief film career in the 1920s. His initial film with the Paramount studio tanked, but he soon built a good reputation for comedic character roles that drew on his early experiences as a music hall entertainer. His 1924 film Charley’s Aunt surpassed Charlie Chaplin’s now-classic Gold Rush in box office ticket sales. The success led to a five-picture deal with Warner Brothers studios. He performed in 37 films during the course of his acting career, which was cut short in 1929 by a sex scandal.

Syd Chaplin spent the next several decades in Europe, managing his brother’s business contracts and deals from abroad.

“Syd wanted to be a film star, too, but he didn’t quite have the magic his brother did. And he knew that.”

—Lisa Stein Haven, assistant professor of English

Syd Chaplin (in a publicity shot, above) performed in 37 films, including the 1925 feature The Man on the Box (with actress Alice Calhoun, right).

P h o t o s : C o u r t e s y o f L i s a S t e i n H a v e n ; P o r t r a i t , C h r i s t i n e S h a w
Homeland heroes

Geographer measures the impact of immigrant donations to Mexican community

When Mexican immigrants settle in the United States, they may join clubs called hometown associations that raise money to fund public works or education projects back home. About 2,000 associations are active throughout the nation.

Although the projects have noticeably impacted quality of life in Mexico, geography graduate student Aaron Malone wanted to study how much they improve the economy. After graduation, Malone traveled to Mexico under a Fulbright scholarship as an extension of his studies at Ohio University. His goal was to develop an objective assessment system that Mexicans can use to evaluate the hometown association efforts.

“Past studies on hometown associations have been mostly subjective and hard to replicate,” Malone says. “I wanted to build a score sheet that the Mexicans can use that is repeatable, so they know what is working and what isn’t.”

Most of the projects funded by the associations deal with community development, such as extending water and sewer lines and providing grants for junior high and high school students. Mexicans, in general, are supportive of this approach but are uncertain about whether this is the most appropriate way to stimulate the economy, he says.

Malone’s main focus of study was Zacatecas, Mexico, a state of 1.5 million residents that has a long history of migration to primarily urban areas of the United States. Migrants may establish or join hometown associations that seek donations and host fundraising events such as rodeos, dances, sports competitions, and beauty pageants.

Through a program called “The 3x1 for Migrants,” the Mexican government will match $3 (one dollar each from federal, state, and local governments) for every $1 hometown associations donate toward a project. The program has operated on a state level since the 1980s and on a national level since 2002.

“The project is then either managed by the municipal government or the works committee,” Malone says.

In two communities, Malone conducted 25 in-depth interviews with key participants in the projects and 25 household surveys. He found that Mexican residents have seen a significant improvement in the quality of their lives, but not as strong of an impact on their local economies. The majority of the Mexicans surveyed would like to see an increase in the number of available employment opportunities, he says.

Through his surveys in Mexico, Malone also discovered that the recent recession in the United States negatively impacted the immigrants’ ability to raise funds for the hometown associations. In many cases, however, Mexican residents and the U.S. immigrants collaborated to raise the necessary funds, or the local government helped.

Before his return to the United States, Malone distributed the assessment tool to various local government officials and hometown associations involved with the program, and will publish it in a local university publication. The student now is working in the inspector general’s office in New Orleans as part of a team that evaluates city government programs.
Sarah Sparks is a 30-something woman more interested in the electronics inside her home pregnancy test than in the fact that it’s flashing the news that she’ll soon be sporting a baby bump.

Sparks—the female protagonist in the new feature film Small, Beautifully Moving Parts—is a self-described freelance technology specialist who gleefully embraces the very gadgets, electrical wires, and computer chips that most of us would admit we couldn’t live without these days. She adores the inner workings of a laptop or a frayed three-prong plug about as much as she loves her live-in boyfriend.

But when Sparks unexpectedly finds herself with child, she’s pushed out of her high-tech comfort zone. Her pending parenthood forces her to reexamine her own estranged relationship with a mother who is, ironically, living off the grid deep in the Arizona desert.
And so begins what Ohio University filmmaker Annie Howell describes as a "coming-of-parenthood road movie." With a bulging belly and a GPS to guide her, Sparks journeys across the United States to reconnect with family and sort out her complex feelings about her pregnancy.

"The going narrative is that this is the best experience of your life and that your whole life will change," says Howell, who co-wrote and co-directed the film with Lisa Robinson. "It's simply more complicated than that."

Small, Beautifully Moving Parts is the first full-length feature film from the creative team of Howell and Robinson, who met at film school at New York University. The project started life as the Sundance Channel online comedy series Sparks, which featured quirky vignettes about Sarah Sparks' adventures with technology.

"The series is very light, and we wanted to do something more complex, to give the characters harder experiences," says Howell, an assistant professor of film.

Robinson says that she and Howell share a similar sensibility, and were both attracted to telling a story about a female character exploring situations not often shown on film.

"We're interested in technology and how it's increased in status in our lives, such as how much we use it to navigate our emotional relationships, our connections to other people, and the world," she says.

Writing, shooting, and marketing a feature-length independent film are no small tasks. But the duo came into the process with industry credentials in hand. Howell has written and directed short films that have played internationally on the festival circuit, including at the prestigious SXSW Film Festival. Her work has aired on the Sundance Channel, PBS, and the Independent Film Channel. An award-winning screenwriter, her most recent script is in development with producers Jordan Horowitz (The Kids Are All Right) and Jared Ian Goldman (Solitary Man). Robinson is an assistant professor of film at Long Island University who has written and directed three short films that have screened at film festivals around the world, including the renowned Cannes Film Festival. She currently has an IMAX film project for the Blue Man Group, as well as a feature script, Synapse, in development.

The character-driven script lent itself to a lean, modest shoot in which the filmmakers used the homes of family in Arizona and California, as well as public locations (such as a scenic stop at the Grand Canyon) for sets. They worked with a small cast of actors and a crew that included Ohio University graduate students in film. The production was funded by Ohio University, private investments, and donations.

"We were a movie set in a van," Howell recalls of the 21-day shoot. "While filming, we were still looking for locations. But that kind of 'go with the flow' attitude worked well for us."

The filmmakers are proud of the performances by the cast. Actress Mary Beth Peil, who's had recurring roles in the TV shows The Good Wife and Dawson's Creek, plays the estranged mother. Anna Margaret Hollyman stars in her first leading feature film role as Sarah Sparks.

"It was exciting to see Anna Margaret take emotional leaps, but also hold onto the comic moments throughout," Robinson says.

Those moments are sometimes evoked through visual elements in the film, and not always through the dialogue.

"When we teach film students, we do advocate for less dialogue," Howell notes. "I encourage getting at the story through other tools—the lighting, framing, production design. How are those elements telling a story?"

Howell says she's inspired by independent filmmakers such as Jim Jarmusch (Down by Law, Broken Flowers), Jane Champion (The Piano, Bright Star), Wim Wenders (Paris, Texas; Wings of Desire), and Sofia Coppola (The Virgin Suicides, Lost in Translation) for their character-driven stories, use of dry humor, framing devices that evoke certain moods and tones, and their understanding of "how the image has the power to unlock the story," she says.

Like these and other indie filmmakers, Howell and Robinson targeted the national film festival circuit to get Small, Beautifully Moving Parts in front of audiences—as well as potential distributors for art film houses and DVD. In March, they scored a major success by gaining entry to the SXSW Film Festival in Austin, Texas, where their film was one of only eight narrative competition features selected from an original pool of 984 submissions.

"It's an important festival in the independent film world in that a lot of filmmakers have taken their first professional step here," Howell says. "It's not as much of a market as Sundance or Toronto, though, so it has more of a relaxed feeling and the pressure is not as high."

The film screened three times to full houses and immediately garnered positive reviews from media outlets such as Variety, The Huffington Post, Film Threat, IFC.com, and Texas Public Radio. And while the film concerns a 30-something woman's pregnancy, it wasn't perceived as a so-called "chick flick" by the diverse audience, which included 19-year-old male University of Texas students and middle-aged men and women. The film features several sympathetic male characters, such as Sarah's supportive, level-headed beau Leon (Andre Holland) and her father Henry (Richard Hoag), who's managing a long-distance love affair via Skype.

"I think the film has a wider appeal," Robinson says. "Even young men were into it and found the characters very appealing."

The filmmakers anticipate that the SXSW Film Festival could lead to bigger things for Small, Beautifully Moving Parts, and also put them in a strong position to launch their next feature film project, which is being conceived with Ohio University and Athens, Ohio, locations. A sales agent is shopping the film to potential distributors. In describing her expectations, perhaps it's not a coincidence that Howell reaches for a maternal metaphor.

"You hope this small child will go out into the world and do something, but you don't know what will happen," she says. "Though we do have high hopes."
EMERGENCY

VIDEO GAME TECHNOLOGY, INTERACTIVE IMAGES HELP FIRST RESPONDERS TRAIN FOR REAL-WORLD DISASTERS

by KAREN SOTTOSANTI
Imagine this scenario: Across town, fire engines are screaming toward a medical center in flames, but back at the station, you are fighting the fire by accessing your web browser. As the firefighters scramble off the trucks and face a billowing wall of smoke and ash, you quickly study a three-dimensional simulation of the medical center, using your keyboard and track pad to move through the rooms as if you were playing a video game.

“There's an auxiliary entrance to the left of the main entrance,” you tell the firefighters via a two-way communication system. The firefighters, responding to your instructions, open the door and inch down the hallway, which is pitch-black after the failure of the electrical system. “Twenty feet down, the hallway turns left,” you report. “There's a staircase on the right.”

In this hypothetical situation, the firefighters were aided in their duties by the Immersive Video Intelligence Network (IVIN), an interactive digital environment. This is no static two-dimensional panorama, such as one might find on a real estate website. IVIN's images are better than 2D, and they're better than “photorealistic.” They are real photographs of the medical center, stitched together and laid over a game engine in order to make them interactive. The photos are merged in such a way that the user can move through the rooms of the center as if he or she were actually there.

The initial IVIN concept was created by John Bowditch, who is the director of Ohio University's GRID (Game Research and Immersive Design) Lab and an instructor in the School of Media Arts and Studies. Bowditch initially conceived of the extraction of 3D models from flat photographs as a way to “bring to life” photographs of historical events such as the Wright brothers' first flight at Kitty Hawk, North Carolina.

But after receiving two grants from the Columbus Urban Area Security Initiative (UASI), IVIN went in a drastically different direction. Columbus UASI, through the Franklin County Office of Homeland Security & Criminal Justice Programs, saw the technology as a tool to assist police officers, firefighters, and soldiers dealing with terrorist attacks, hostage situations, active shooters, natural disasters, fires, or accidents at strategic Columbus-area buildings.

Currently, when first responders arrive at the scene of a disaster, they often use an online information portal called ACAMS (Automated Critical Asset Management System), says William McKendry, a critical infrastructure and key resources consultant for the Franklin County Office of Homeland Security & Criminal Justice Programs. ACAMS, which is administered by the U.S. Department of Homeland Security, provides two-dimensional floor plans of buildings, as well as critically important information such as site security measures. McKendry says that IVIN will enhance ACAMS by providing 3D models of buildings.

“It's a great aid to first responders,” he says. “Basically, they have eyes where they don't have any visuals. They can go inside the building without having to go inside the building.”

Threats to buildings aren't just limited to terrorist attacks. McKendry lists various scenarios in which IVIN could be a lifesaver. “A natural disaster or hostage situation is much more likely than terrorist activity,” he says. “IVIN could be used for tornadoes or floods, for example, or a building collapse from an earthquake.”

McKendry uses the spring 2011 outbreak of deadly tornadoes across the South and Midwest as an example of a situation in which IVIN would prove useful. “The first responders faced buildings that were partially destroyed,” he says. “IVIN would have helped them determine how best to get to those destroyed parts through the parts that were still standing.”

In addition, Bowditch says, public safety divisions such as the Columbus police and fire departments will soon use IVIN to train first responders. Instead of expensive field work, first responders can learn how to handle emergencies in a virtual space that is identical to the real space in which they would be working. McKendry is enthusiastic about the idea. “I'm reaching out right now to the organizations that have IVIN in so we can get their training people together,” he says. “From a training standpoint, it will be used immediately.”

From spring 2008 to summer 2011, Bowditch says, his team applied the IVIN process to 20 different Columbus buildings, “areas that could be densely populated and/or places that have political or economic or energy significance.” For security reasons, the buildings can't be named, but McKendry says that they include public safety facilities, public utilities, commercial high-rise buildings, commercial manufacturing facilities, and a large indoor arena.

Using a virtual world to make the real world safer requires an enormous amount of time and effort. Bowditch explains that the IVIN process consists of two steps: shooting the images of the rooms in a building and then processing the images to create an immersive virtual environment. “It's a very intensive process,” he says. “We had 30 shoots to do in 18 months, and we also had to process all that data.”

For the demanding project, the GRID Lab assembled teams of Ohio University students—mainly from the School of Media Arts and Studies and the School of Visual Communication—to travel to Columbus. “One thing I was really excited about with this project was the number of students we were able to employ,” says Beth Novak, IVIN's resident interface designer and an associate professor of media arts and studies. “It's really helped our students in a way that you can't necessarily teach in a classroom. It's an important project with real deadlines, the kind of experience that you don't have until your first job.”

Once in Columbus, the students used cameras with fisheye lenses, mounted on tripods, to take 360-degree photographs of every square inch of every room in a building. John Gibson, the GRID Lab's technical artist and leader of the 3D modeling team, worked on the site shoots when he was a student. Gibson, who is also the head of the Columbus IVIN project's post-production team, says that the early days of the project were extremely challenging. “No one had ever done this before,” he says. “There was no instruction manual. We were just trying to figure out the best processes and practices.”

The team's hard work has paid off. There is a patent pending on the technology, and IVIN has grown so rapidly that a company called IVIN3D, headed by CEO Jean Marie Cackowski-Campbell, was created to privatize the project. “All projects will be done through the company,” Bowditch says, “which will mean lasting job creation for central Ohio.”

The IVIN team continues to propose new applications for the technology. Bowditch eventually wants to make IVIN capable of providing information such as which doors of a building are locked at what times, the locations of flammable chemicals, and the locations of emergency shutoffs for utilities. The team has discussed how IVIN could help coordinate building evacuation plans and provide online tours of museums, amusement parks, and other facilities.

Perhaps by then, he says, the technology also could simulate what's happening in a building in real time. “We're just at the tip of what we can do with this technology,” he says.
AN ENGINEER’S INVENTION COULD REDUCE THE CRACKS, BUMPS, AND POTHoles PLAGUING THE NATION’S HIGHWAYS

by MARY REED
The old joke goes like this:

THERE ARE TWO SEASONS IN OHIO—WINTER AND ROAD REPAIR.

Of course it’s that first season, winter, that begets the second. Sub-freezing temperatures put a heavy strain on roadway asphalt, creating cracks. Once water enters these cracks, freezes, and expands, the result is that all-too-familiar bumpy highway dotted with orange construction barrels.

Sang-Soo Kim used to contemplate this problem during his weekly commute between his job in Athens and Columbus, Ohio, where his wife was a graduate student at Ohio State University. “At first, I listened to music and listened to radio,” he recalls. “It’s a two-hour drive, and it’s enough time to think about my research.”

A civil engineer, Kim’s expertise is the petroleum binders that hold road asphalt pavement together. A major frustration for Kim and others in the transportation industry was their inability to accurately predict the temperature at which a particular asphalt binder would crack. A more precise testing system could help officials invest in asphalt blends that would be more durable for certain climates.

It’s an issue with hefty financial implications. The Ohio Department of Transportation (ODOT) spends up to $1.5 billion on road construction and $15 million to $20 million on asphalt-related maintenance annually. The federal highway budget comes in at $40 billion a year. On the consumer end, a U.S. Environmental Protection Agency analysis shows that poor road conditions, on average, contribute to a 4.3 percent reduction in fuel economy, with a maximum fuel economy reduction of 50 percent.

As Kim traveled back and forth on U.S. Rt. 33, he had a brainstorm. “One day I sat down in my office and started drawing some diagrams,” recalls Kim, an associate professor of civil engineering at Ohio University. “I had a rough draft and did some theoretical calculations.”

With that, the Asphalt Binder Cracking Device, or ABCD, was born. Patented in 2007, the ABCD easily incorporates a binder’s stiffness, strength, and thermal expansion coefficient (which is how its volume changes with temperature) into the testing process. The invention features a small, ring-shaped test bed that Kim can place in an environmentally controlled chamber—where the asphalt binder, to record the exact temperature point at which the binder will crack.

“ABCD determines the low-temperature performance of asphalt binders in field-like conditions,” Kim explains. “Asphalt will stretch out, but once the temperature continues to drop, asphalt becomes brittle and cannot take the stress.”

He holds up a 2-inch diameter ABCD ring, which resembles an oversized wedding band, silver in appearance but made of an alloy that experiences virtually no contraction under temperatures in a chamber that can drop to minus 60 degrees Celsius (minus 76 F). The ring sits in a slightly larger-diameter silicone mold. Asphalt binder is poured into the space between. On the inside of the ring are electronic sensors that measure temperature and strain. The latter records the asphalt binder compression when the material contracts under cold temperatures, as well as the sudden release of pressure when it breaks. These sensors are connected to a computer that gives results in Microsoft Excel.

“What speaks highly to Dr. Kim’s abilities and approach is that he took basic engineering theory and engineering materials knowledge and applied it very intelligently,” says Dave Powers, a materials engineer with ODOT. “He took something very simple and made it work. Other people tried this in the past and were not entirely successful.”

After Kim finally made his breakthrough, it was time to manufacture a prototype. He first worked with the machine shop in the Russ College of Engineering and Technology, and later with professional fabricators, to create a workable ABCD.

In 2008, Kim licensed the technology from Ohio University and created a start-up firm, located in the university’s Innovation Center, to commercialize and market the invention.

“When I started the company and had to make a name for it, I just came up with EZ Asphalt Technology,” Kim says. “That’s basically what it’s all about. I wanted to incorporate the technology, and I wanted people to use it easily.”

Kim’s road to commercializing the ABCD has been relatively smooth. He has received roughly half a million dollars in research grant funding, including $225,000 in 2008 from the Federal Highway Administration’s Highways for Life technology partnership program. This grant also provided money for a handful of Federal Highway Administration offices to purchase the ABCD. Kim also has received funding from the state of Ohio’s Enterprise Appalachia program, as well as from the federal Transportation Research Board and ODOT.

In 2011, the ABCD test method was adopted as a national standard in the American Association of State Transportation and Highway Officials (AASHTO) specifications. Kim’s next goal is for the Federal Highway Administration to recommend that AASHTO adopt ABCD as a grading test method, meaning that all asphalt produced and sold in the United States would need to be tested with the device.

If so, EZ Asphalt Technology would likely see a boost in business. Each batch of asphalt binders needs to be tested for durability, due to subtle differences based on the petroleum source, the refinery, and the additives. The ABCD could have financial implications for the taxpayer as well, considering the overall costs of road construction and maintenance.

ODOT’s Dave Powers says his team has set aside money in the department’s proposed 2012 budget to purchase Kim’s device. With a current price tag of about $50,000, Powers considers the ABCD a good investment. “I think you look at that in light of how many million tons of asphalt go down in the state every year, and the most expensive component of the asphalt is the asphalt binder,” he says. “Anything we can do to enhance performance of those binders is a plus.”

Although Kim is no longer commuting between Athens and Columbus, he’s still thinking up new ways to reduce the need for those orange barrels along U.S. roadways. Up next? A similar device to test concrete. He holds up a sample, which looks like its asphalt predecessor except that it’s the size of a barbell weight. And Kim would like to commercialize a third measurement device for the study of flow of soft solids such as asphalt and concrete. The name? Kim is keeping it simple: the Easy Flowmeter using Gravity, or EFG. The rest of the alphabet awaits this civil engineer’s imagination.
Psychologist Mark Alicke offers a new view of how we blame—and suggests that playing the blame card is not always a bad thing.
Think about the Garden of Eden story. You know how it goes: Adam blames Eve. Eve blames the serpent. God blames all three. In short, “the blame game commences,” as Ohio University psychologist Mark Alicke puts it.

Actually, in Alicke’s view, the blame game is even more fundamental than the Eden creation story. It’s evolutionary. Blame, he says, is linked to the inborn capacity to evaluate, which an organism uses to decide whether something is beneficial or a threat to its survival. Borrowing terminology from legal philosopher Joel Feinberg, Alicke says creatures use blame to “stain” things, marking them as harmful. Blaming is an essential “adaptive strategy,” he says—reflexive and “primitive.”

To illustrate, imagine you get out of bed at 3 a.m. to get a snack from the refrigerator. Just as you arrive at the fridge in the dark, you stub your toe hard. In swift response, you kick the refrigerator door.

“That’s how primitive blame is,” Alicke says.

Blame is simply “a very natural thing to do,” Alicke continues. “Telling people not to evaluate, not to judge, is like telling them not to be hungry or not to think about sex. I’ve always been doubtful about trying to get people to not do the things they do most naturally.”

Being doubtful is an occupational hazard for Alicke. As a social psychologist, he's professionally inclined to question the assumptions people make. He's spent a good deal of his research career questioning the assumptions people make about themselves, a pursuit known as the psychology of self-identity. Human beings, Alicke has observed, routinely overestimate themselves as better than they actually are (self-enhancement) and work hard to maintain that illusion (self-protection), even “when reality sets in.” Alicke and Constantine Sedikides of the University of Southampton recently co-edited the Handbook of Self-Enhancement and Self-Protection (Guilford Press, 2010).

Alongside these studies, Alicke has maintained a fascination with the psychology of blame. More than 15 years ago, he defined what he calls the “culpable control model” to describe how humans judge and place blame. At the time Alicke was developing his theory, most existing blame models were based in the legal realm and assumed that when we ascribe blame, we do so based on rational assessment.

True to form, Alicke questioned the assumption of rationality. His alternative takes into account the impact of spontaneous negative (and sometimes, positive) evaluations. In Alicke’s view, our primal impulse to blame has a significant effect on our supposedly rational judgments—our desire to blame is automatically informed by our values and beliefs, and we justify the blame we place according to those feelings. In short, our initial estimation of a person’s blameworthiness prevails.
LICKE AND HIS COLLEAGUES have conducted a number of studies demonstrating the effects of “culpable control.” In one early study, participants were told that a car accident occurred as a young man was speeding home to hide either an anniversary present for his parents or a vial of cocaine. The circumstances of the wreck were ambiguous due to a partially obscured stop sign. As the culpable control model predicts, when the driver’s motive was to hide cocaine, his driving was cited as much more of a cause in the wreck than the blind stop sign, “but precisely the opposite was true when his motive was to hide an anniversary present,” Alicke notes. “Negative evaluations of the driver whose motive was to hide cocaine induced participants to skew the evidence to support their desire to blame him.”

In a later scenario Alicke presented to participants, a homeowner shoots and kills an intruder who is either a dangerous ex-convict or a physician-neighbor in the home to feed the cat (an arrangement made by the homeowner’s wife without his knowledge). Again, as Alicke’s model predicts, participants blamed the homeowner more when the victim was the cat (an arrangement made by the homeowner’s wife without his knowledge). As in the previous study, blame was based on a desire to punish the homeowner for the evidence they wished to see.

In most situations, it’s just not possible to say with certainty whether a person intended to do wrong or played a causal role in an outcome. “But when we make such judgments, those judgments are very much influenced by our other kinds of evaluation,” Alicke says.

No matter the context, blaming involves a morally charged evaluation—we deem someone or something bad or wrong. Alicke’s work aims to explain how the moral judgments behind blaming work, and why we humans, he says, are so “steadfast in blaming others.”

Debating moral questions is a “basic tendency” for Alicke, which he attributes to his ancestry. “My great-grandfather was a Talmudic scholar, and he would sit in the synagogue all day debating obscure points of the Torah,” Alicke explains. “I think that’s basically my gig.”

In short, although Alicke is a professor of psychology, he’s a philosopher at heart. His career-long blending of social psychology and moral philosophy has often made him feel a bit “like Don Quixote tilting at windmills,” he says. As it turns out, Alicke was on the leading edge of a long blending of social psychology and moral philosophy has often made him feel a bit “like Don Quixote tilting at windmills,” he says. As it turns out, Alicke was on the leading edge of this field only now coming into definition.

“Mark’s research supporting his culpable control model was ahead of its time,” says Joshua Greene, director of the Moral Cognition Lab at Harvard University. “It has been very influential in recent years as psychologists, philosophers, and legal scholars have devoted more attention to the psychology of blame and punishment.”

Alicke and Greene are both part of the field of moral psychology, which explores the cognitive and neural underpinnings of moral judgment and behavior. Spurred by converging research trends in the study of emotions, evolutionary biology, and neuroscience, moral psychology is undergoing “a multidisciplinary renaissance,” writes prominent social psychologist Jonathan Haidt in the Handbook of Social Psychology. Psychologists, philosophers, legal theorists, neuroscientists, ethicists, and economists are all turning their attention to understanding how the moral mind and brain work.

“Moral psychology is really an exciting kind of cooperation,” Alicke says. “And it’s heartening to realize that maybe I’m not as bad a philosopher as I thought.”

As in any academic discipline in its infancy, scholars of moral psychology are actively defining their field by attending conferences, publishing articles, and establishing a journal. For his part, Alicke is updating his culpable control model. He points out that in the academic world, “you’re in better shape if people are paying attention enough to disagree,” and his own views on the psychology of blame attract their fair share of debate.

One major debate concerns whether negative emotional evaluations really skew moral judgment. The debate about emotions is, in effect, about “how rational or irrational people are,” Alicke says, especially in courtroom settings. Although he thinks the rule of law goes a long way toward promoting rationality, “if jurors are doing what I think they are doing, there are going to be a lot of unfair legal decisions made.”

“A racist looking at a black person’s offense would say, ‘Yes, he intended it, he caused it,’” Alicke continues, “even if that’s not really the case, and the racist would be convinced that he or she has made a perfectly rational judgment.”

For Alicke, it comes down to evaluation, not emotion. “Our basic need to evaluate biases our judgment,” he says. “Emotions amplify that tendency, but evaluation is there first.”

BEING AN EXPERT ON THE PSYCHOLOGY OF BLAME has its other challenges. For one thing, Alicke says he’s become a “disaster go-to guy.” After Hurricane Katrina, 9/11, and the recent earthquake and tsunami in Japan, for instance, reporters from The Wall Street Journal, The New York Times, and other media outlets come calling to ask, Who’s to blame, and why are we blaming them? Alicke admits reporters may finish their interviews feeling a bit frustrated, because the placement of blame is “so ambiguous.” After Hurricane Katrina, for example, it...
was easy for someone with a knee-jerk negative reaction to President Bush to hold him responsible and heap on the blame. As his culpable control model suggests, “for someone you dislike, the evidence gets skewed in a way that enhances their culpability,” Alicke says. In sum, “it’s nearly impossible to correct for our own personal culpability,” Alicke says. In sum, “it’s nearly impossible to correct for our own personal biases.” And because it is much easier for people “to do more bad to you than to do too much good,” Alicke says, “we are more motivated to nail ‘bad’ people than promote ‘good’ ones.”

In the cases of the Katrina or Japan disasters, it would seem fitting to blame the forces of nature or God, “but most people don’t do that,” Alicke says. Pointing fingers at impersonal forces just doesn’t satisfy the strong tendency we humans have to assign blame. “We can’t do anything about God or nature, so we always turn to people,” he says. So Japanese officials were blamed for inadequate floodwalls and faulty building codes, and forecasters were blamed for insufficient predictions, and on and on. These politicians, officials, and forecasters may or may not be “villains,” but that doesn’t really matter when it comes to blame. “Blame’s primitive nature dictates that people who wish to forgive must overcome the visceral satisfaction that the blame game delivers,” Alicke says. “When strong emotions are evoked, people blame first and ask questions later.”

Recalling the events of September 11, Alicke notes that “there will forever be conflicting ideas about the blameworthiness of various parties for the attack.” In large part, he says, this is because of the influence of “hindsight reasoning.” Alicke explains that, as many scientific studies have shown, once we know an event has occurred, the event then seems inevitable. “So hindsight reasoning makes the events leading up to the 9/11 disaster seem more negligent,” he says. Another phenomenon at work in placing blame around 9/11 and other such disasters is “counterfactual reasoning,” which Alicke describes as “if only” thinking, “imagining how different actions at each juncture could have prevented one or more crashes heightens people’s emotional reactions to the events and increases the intensity of their blame.”

When there is plenty of blame to go around, “the question becomes, when is blame justified, and when is it less justified?” Alicke says. His answer? “There are times when people blame when they shouldn’t, and there are situations where people don’t blame when they should.”

Note that Alicke says there are times when people should blame. Harvard University’s Joshua Greene says Alicke’s work “shows how quirky the psychology of blame is,” and perhaps the most unconventional aspect of Alicke’s theory is this: He thinks blaming can be a good thing.

The Live in a Forgiveness Age. Guided by religious instruction as well as the self-help industry, we are urged to forgive and forget, let go, and move on. Just as the field of moral psychology has flourished, so has the forgiveness field, featuring scholars such as psychologist Fred Luskin, director of the Stanford (University) Forgiveness Project. The basic premise of Luskin and others is that forgiving is good for us. Alicke isn’t so sure. Ask him directly about forgiveness, and he squirms. After a little wry chuckling and a big sigh, though, he’ll admit he’s a “forgiveness skeptic.” Countless religious leaders and therapists tell us we can make a conscious choice to forgive, and Alicke acknowledges that many people do. But is that true forgiveness? He has his doubts. Say a woman forgives her husband after he has stopped abusing her. “Maybe she really does forgive him,” Alicke says, “but what does that mean? We say it proves she has a strong character, that she can be magnanimous and move on. But it could also mean that she has a very weak sense of self. It all depends on the circumstances, on what wrongdoing is involved, and the conclusions you come to about what you think was going on.”

In other words, it all depends on our evaluation. For Alicke, forgiveness just isn’t natural, the way placing blame is. What’s more, blaming can be the right thing to do. In cases of intentional negligence or reckless wrongdoing, blame can be legitimate and justified, Alicke says. In short, there is such a thing as “good” blame.

“A good blamer is someone who is very clear at knowing when a person has done wrong,” Alicke says, “and who can effectively draw the line to not deal with that person anymore, but a good blamer is also someone who doesn’t draw that line too quickly.”

Given his immersion in the psychology of blame, you might think Alicke would be a pessimist, but he’s not. He’s working on a book that he hopes will illuminate research on the psychology of blame for his scholarly peers, but also help the rest of us feel better about our natural instinct to blame.

“Today, there are so many cultural forces, religious and otherwise, making us feel bad about who we are. I want to redress the balance of those forces,” he says. “It’s not that blame is always good—as always, it depends. But we’re human beings. We are who we are, and we don’t need to be beaten down by forces telling us to be something we are not.”
The HEMINGWAY CONNECTION
He was the larger-than-life literary icon who, in the 1930s and 1940s, was considered to be the greatest living writer of prose fiction. He was a risk-taker with an unshakable thirst for adventure. He drove an ambulance in the Great War and was seriously wounded. He loved boxing and bullfighting and being where the action was. And after his reputation was established with the publication of *The Sun Also Rises* in 1926, Ernest Hemingway became the spokesperson for the post–World War I generation of writers.

In his studies of the Harlem Renaissance, a cultural movement that spanned the 1920s and 1930s, Ohio University’s Gary Holcomb became interested in Hemingway’s influence on several of its writers, especially the Jamaican-American writer Claude McKay. This work led him to ask two broader questions: Exactly what was Hemingway’s influence on black writers of this time and in the decades that followed the Harlem Renaissance? And how, conversely, did these black writers influence Hemingway?

(SAbove left) Ernest Hemingway returned home from World War I after being wounded. (Above right) Ernest Hemingway occasionally worked outdoors at his home in Idaho.
WHAT SPECIFICALLY INTERESTED HOLCOMB, an associate professor of African American literature in the Americas, is what he calls the “conversation,” or “inter-textuality,” that occurs between black writers and Hemingway in their fiction.

“Five years ago, I noticed that the Hemingway Society was looking for someone to do a panel at the next Modern Language Association conference, something on new directions in Hemingway studies. So I organized a section on Hemingway and black writers,” says Holcomb, who has published a book on Claude McKay’s work, as well as a dozen journal articles and book chapters on African-American writing.

The panel attracted a wide range of literary scholars, several of whom encouraged Holcomb to publish an anthology on the subject. The highly respected black literary scholar Charles Scruggs, an English professor at the University of Arizona, was particularly excited about this project, so Holcomb asked him to be co-editor.

What resulted is Hemingway and the Black Renaissance, which includes 10 essays on literary connections between Hemingway and McKay, Richard Wright, James Baldwin, Ralph Ellison, Toni Morrison (one of Hemingway’s more vocal critics), and others. The book will be published in March 2012 by Ohio State University Press.

Holcomb’s contribution to the collection covers McKay, the first black writer to publish a novel, Home to Harlem, that made the best-seller lists in the United States. “He wrote the first book of poetry identified with the Harlem Renaissance, a book that expressed the righteous anger of blacks living in New York,” Holcomb says. “He was the first poet acclaimed for his writing in Jamaican dialect and the first black writer to receive the Medal of the Jamaica Institute of Arts and Sciences.”

Holcomb gives a brief plot synopsis of Home to Harlem: “Jake, a young black man, joins the army in World War I, with the desire to go to Europe to fight for democracy. But he’s not permitted to fight; instead, he’s relegated to the servant class in the military and becomes so angry about this that he deserts. He travels first to Havre and then to London for a couple of years before he gets homesick and returns to Harlem.”

The first time he read McKay’s book, Holcomb was struck by various echoes from The Sun Also Rises, published two years before Home to Harlem.

“The protagonist of The Sun Also Rises, also named Jake, was, like McKay’s central character, an expatriate American in Europe. Both joined to fight in the Great War, underscoring their roles as men of action and consequence. Hemingway’s character suffers a war wound that causes him to be impotent, and so is emasculated by the war, as is McKay’s Jake, though not in a physical way.”

It’s clear that McKay admired Hemingway’s novel. In McKay’s memoir, A Long Way From Home, published in 1937, he wrote, "When
Hemingway wrote *The Sun Also Rises*, he shot a fist in the face of the false romantic realists and said: "You can't fake about life like that. He has most excellently quickened and enlarged my experience of social life."

Holcomb picks up his copy of this memoir and reads from another section. "Ernest Hemingway was the most talked-about of young American writers when I arrived in Paris ... and I must confess to a vast admiration for Ernest Hemingway." McKay and other black writers of the time responded to Hemingway, Holcomb says, because he wrote with clarity, honesty, and courage that led to important insights into the American scene.

McKay and Hemingway met only once, Holcomb adds, introduced through a mutual friend, but no record exists of their conversation.

Holcomb stresses that the interchange between Hemingway's writing and works by black authors is not unilateral—that Hemingway also was influenced by the work of Harlem Renaissance writers.

"Hemingway clearly had shared concerns and shared aesthetic approaches with many of the black writers he read," says Holcomb. "As he was writing his first book, *In Our Time*, there is evidence that he was familiar with the most famous black novel of the time, Jean Toomer's *Cane*, which was published in 1923 and, like Hemingway's book, challenges the convention of the short story form."

Later, in the 1930s and 1940s, Hemingway's influence would be "unavoidable" for emerging black writers such as Richard Wright, James Baldwin, and Ralph Ellison, Scruggs notes in his contribution to *Hemingway and the Black Renaissance*.

Wright is perhaps best known for his novel *Native Son* (1940) and his semi-autobiographical *Black Boy* (1945). Baldwin's first novel, *Go Tell It on the Mountain*, was published in 1953 and was soon followed by a collection of essays, *Notes of a Native Son*. Published in 1952, Ralph Ellison's *Invisible Man* explores the theme of man's search for his identity and place in society, as seen from the perspective of an unnamed black man in the New York City of the 1930s. This novel won the National Book Award in 1953.

"Although Wright, Baldwin, and Ellison would respond to (Hemingway's) fiction in terms of their various thematic concerns, they all appropriated his existential theme of 'a man alone,' which Hemingway established in his novel *To Have and Have Not*," Scruggs says.

In an interview, Wright, who had numerous Hemingway texts on his bookshelves, had high praise for his contemporary: "I like the work of..."
"In terms of artistry, Hemingway was a key exemplar for Ellison; in terms of racial portraiture and social awareness, Hemingway was an anti-exemplar for Ellison."

JOSEPH FRUSCIONE
Georgetown University and George Washington University

Hemingway, of course. Who does not?"

― "What he liked about Hemingway was his focus on the theme of loneliness," Scruggs says. "The critic Jerry Bryant has noted that loneliness is a Wright trait, but it's also clearly a Hemingway trait."

Wright's best-known novel, *Native Son*, also explores recurrent Hemingway themes. "*Native Son* echoes Hemingway's themes of violence, isolation, and dread," Scruggs points out. "The Native American husband who slits his throat in Hemingway's story 'Indian Camp' would influence Wright's description of Bigger severing Mary's head to fit her into the furnace. Similar grim imagery exists in Hemingway's story "Alpine Idyll" in which the Alpine woodsman living alone puts his dead wife in a shed and uses the face of her frozen carcass to hang his lantern."

Less than six months after Hemingway committed suicide on July 2, 1961, James Baldwin wrote an article for *The New York Times* that assessed his indebtedness to four writers of the previous generation: Faulkner, Fitzgerald, Dos Passos, and Hemingway. He admitted his obligation to them, but believed that as their "descendants," the younger writers had to "go further than their elders went. It is the only way to keep faith with them."

One way Baldwin kept the faith was by adopting and adapting a recurrent theme of Hemingway's—the longing for refuge, especially a refuge for lovers.

In the vignette in *In Our Time*, Hemingway describes a house in which a wall is blown away by a bomb and "an iron bedstead hung twisted toward the street." "This domestic detail is perhaps Hemingway's most devastating comment on the war," Scruggs says. "For what is destroyed is the very heart of the house itself. The war has murdered sleep, sex, and intimacy, themes that Hemingway returns to in *A Farewell to Arms*. In Baldwin's fiction, Scruggs says, the theme of a longing for refuge appears in the story "The Outing," *Go Tell It on the Mountain*, *Giovanni's Room*, *If Beale Street Could Talk*, and *Another Country*."

But Baldwin was also critical of Hemingway. In his later fiction, seen especially in *For Whom the Bells Tolls*, Hemingway abdicated "the effort to understand the many-sided evil that is in the world," Baldwin stated in an essay. He ended the piece by speaking directly to Hemingway's pastoral theme, his idealization of rural life and nature. It is "time," Baldwin said, "to turn our backs forever on the big two-hearted river," referring to Hemingway's short story published in his first collection of stories, *In Our Time*. Baldwin felt that by the
time World War II had ended, with six million Jews slaughtered in Europe, Hemingway’s pastoral vision was no longer relevant, if it ever was, Scruggs notes.

In his contribution to the forthcoming collection, Joseph Fruscione of Georgetown University and George Washington University highlights the similarly complex relationship Ralph Ellison had with Hemingway’s work.

"On the one hand, Hemingway was one of Ellison’s most important literary ‘ancestors’—Ellison’s term," Fruscione says. "Ellison embraced Hemingway’s influence, eagerly read his work, collected over a hundred media articles about Hemingway, taught his work as a visiting professor, and often praised him as a literary example."

On the other hand, Fruscione points out, Ellison took issue with the problematic, limited portrayals of black characters in Hemingway’s work, as well as with what Ellison saw as Hemingway’s assessment of Twain’s Adventures of Huckleberry Finn. Ellison wrote that Hemingway was blind to the moral values of the book, dismissing the last section of Twain’s novel when Huck and Tom “steal” Jim out of slavery, calling that part "cheating."

"In terms of artistry, Hemingway was a key exemplar for Ellison; in terms of racial portraiture and social awareness, Hemingway was an anti-exemplar for Ellison," Fruscione says.

Ellison mentions Hemingway in several other essays, such as “Society, Morality, and the Novel,” “The World and the Jug,” and “Twentieth-Century Fiction and the Black Mask of Humanity,” Fruscione adds.

Another indication that Ellison admired his literary ancestor is the fact that he retyped parts of some Hemingway texts, including “The Short Happy Life of Francis Macomber,” A Farewell to Arms, and For Whom the Bell Tolls. "Ellison did this to better learn Hemingway’s style," Fruscione says. “And there are some annotations in the margins of a Hemingway retyping that show Ellison was studying the structure."

A young Ellison saw a mature Hemingway speak in New York in 1937, but there is no evidence that the two ever met. There’s also no evidence, Fruscione says, that Hemingway read Ellison’s work. “Ellison’s rise after Invisible Man in 1952 coincided with Hemingway’s personal and professional decline,” he says.

In addition to Fruscione, Holcomb and Scruggs invited several other literary scholars to contribute essays to the forthcoming collection, including pieces that discuss the writers Langston Hughes and Toni Morrison. Not all essays in the book may agree on the connections between Hemingway and the black writers, Holcomb says, but he and Scruggs are eager to start a dialogue on the topic.

The collection diverges from conventional analysis of black literature, Holcomb notes, which has focused more on the influences and conversations that occurred only within the black writing community. The project is representative of a much larger trend in literary and African-American studies, he says, in which scholars are taking a new look at the influence of race, politics, and sexual orientation on the work of authors. Holcomb, for example, is developing a project that will expand the focus of his 2007 book Claude McKay, Code Name Sasha: Queer Black Marxism and the Harlem Renaissance, which will explore the issues of homosexuality and communism in the black literary community.

As for the Hemingway collection, Holcomb thinks that the time is right to give a wider audience to a subject that, until recently, was buried in the scholarly archives. "Hemingway’s public persona overshadows his literary art," he notes. "But if you go back in the archive and look at what these writers had to say, they weren’t concerned with his persona—they were interested in his text."

Though Hemingway certainly wasn’t the only white influence upon black writers such as Wright, Baldwin, and Ellison, Scruggs adds, “Hemingway’s fiction, especially his writing about war as a metaphor for modern life, gave them a perspective and a method from which to launch their own equally brilliant fiction about America as ‘another country’ and their place within it.”
DOCUMENTARY TRACKS EFFORTS OF FEMALE MARINES REACHING ACROSS CULTURAL BOUNDARIES IN AFGHANISTAN

story by
ANDREA GIBSON

photography by
REBECCA SELL

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It’s the bun of long hair, wrapped and nestled between the military helmet and collar of the flak jacket, that gives the female Marines away.

Cloaked in desert-tan fatigues, boots, and sunglasses, a rifle laid across their chests, these women could be mistaken, at first glance, for their male colleagues. But these soldiers share a unique role in their battalion, as well as in the patriarchal culture of Afghanistan where they’ve been stationed.

Photojournalist Rebecca Sell heard them referred to as the third gender.

In an effort to stabilize communities in the country as part of the counterinsurgency war, the U.S. Marines created Female Engagement Teams (FET) to reach out to Afghan women. Local culture prohibits men outside of the family—in this case, the male Marines—from looking at or speaking to females. As Afghan women represent almost 50 percent of the population, the military realized that it was missing contact with a substantial part of the community.

In summer 2010, Beth Walls, Claire Ballante, and Rosemarie Epiti joined a battalion at Musa Qala, a former Taliban stronghold in the central region of the country. They were part of a larger contingent of about 40 female Marines spread across Afghanistan in the first full-time FET effort.

Sell, an assistant professor of visual communication at Ohio University, documented their experience for three weeks in August. On assignment for the Free-Lance Star in Fredericksburg, Virginia, where she previously worked as a journalist, she captured images and video of the FET’s nascent attempts to establish relationships with the Afghan women. Sell’s work has since been published on Time.com and in The Marine Corps Times. Related work has appeared in The Washington Post and on washingtonpost.com.

Inspired by a conversation with her brother-in-law, a war veteran, about the public’s lack of understanding about the role of women in the military, Sell read an article about the FETs and spent three months lobbying the military to document them. Once on the ground, the photojournalist worked quickly to build a relationship with her subjects and establish trust.

“It’s about knowing when to pick up the camera and when to put it down,” she says of getting to know the Marines while still doing her job.

Sell’s experience was a microcosm of what the FET itself was up against. First on the agenda: Establishing rapport with a tight-knit unit of male Marines.

“We come into the battalion, we haven’t been with them that long, and they just see us as a liability,” Corporal Walls explains to Sell in her multimedia documentary. “They see us as a person other than a grunt. We don’t want to be a burden. We want to be one of the Marines, because we are.”

Making contact with Afghan women, who are rarely seen outside of the family compound, was a bigger logistical challenge, however. The FET couldn’t travel without a male escort, and there were certain security patrols they couldn’t join. Afghan community members could be skeptical of the FET’s motivations, Walls told Sell.

“The women didn’t want to talk to us because they were scared that they would get in trouble with their husbands or their brothers,” she says. “Some of them felt like they would be targeted by the Taliban. Some of them think that we were trying to westernize their women.”

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(above) Male Marines map the shops in the Musa Qala District Center bazaar, gathering information such as owner and goods, as a child looks on. The shops change often.
Corporal Beth Walls, team leader, and her female colleagues often worked out in their free time at the military base. “There was a lot of downtime there,” Sell says.

For cultural and security reasons, the three members of the Female Engagement Team (FET), including Lance Corporal Rosemarie Epiti, center, could travel only in the company of male Marines, and embed only with certain patrols, during their efforts to make contact with Afghan women.

(above) Corporal Beth Walls, team leader, and her female colleagues often worked out in their free time at the military base. “There was a lot of down time there,” Sell says.

(right) FET and members of the 1st HNS Company Battalion patrol through Musa Qala and through the bazaar to attempt to gain the trust of locals.
Once inside the compounds, the FET, accompanied by a female hospital corpsman and a translator, evaluated the health and wellness of the women and their children. Malnutrition and dehydration were common concerns. The FET provided information and resources for cooking and hygiene, including toothbrushes and bars of soap.

The female Marines also gauged the women’s general sentiments about the state of their community. Military forces had largely stabilized the conflict in the Musa Qala District Center and were focused on public works projects, though some violence lingered on the outskirts. In addition, the FET tested the women’s receptiveness to starting a sewing school—a controversial concept in an area where young girls weren’t welcome in the classroom.

At the end of the mission, the FET members acknowledged that they couldn’t make enormous changes in the lives of the Afghan women and children in a few short months. But they were optimistic that they laid the groundwork for future relationships.

“I really appreciate the experience; it’s been amazing, it really has,” says Ballante, Corpsman 2nd class, in the documentary. “But you’re not going to see results right away. It kind of breaks your heart because all you want to see is progress and you just can’t see it. It might not be the next FET. It might be the fourth or fifth FET that will come in and make a difference.”
At the end of the mission, the FET were optimistic that they laid the groundwork for future relationships with the Afghan women and children.
When the U.S. Marines cleared Sell to join the FET, the photojournalist had no idea with which unit she would embed until she arrived in Afghanistan. She swiftly studied the history and culture of her assignment, Musa Qala.

Although Sell had photojournalism experience in Chile and Ghana, this was her first time embedding with a military unit. Pitching a specific story—a documentary on the relatively new teams—with the backing of an established media outlet is the key to gaining access, she explains. Journalists can’t just show up in the Middle East, camera and laptop in hand, and expect credentials.

Sell drew on the expertise of a community of Ohio University photojournalists seasoned with covering military conflict. Graduate student Victor Blue and alumnus Chris Hondros (who later died on assignment in Libya) gave useful advice on the embed process, as well as how to pack gear and body armor for the desert.

Once on site, Sell had to be persistent about ferreting out information from the military about daily activities, to determine her reporting strategy. In addition to the FET story, she discovered an opportunity to cover the activities in Musa Qala for The Washington Post.

It’s not only important to have a thorough understanding of the issues and culture, but to watch for unique news angles and reporting techniques, says Sell, whose travel was funded by Ohio University. In addition to her still images, Sell shot video footage to create multimedia stories—a selling point to news outlets.

Though never in danger on assignment, Sell was mindful of any security instructions the Marines provided. Her biggest challenge, she notes, was to keep focused on the story in the face of daily uncertainty about access to sources and plans.

“You won’t have enough room in your suitcase,” she was told by another photojournalist, “for the patience you need to bring.”

“We don’t want to be a burden. We want to be one of the Marines, because we are.”

CORPORAL BETH WALLS
Lance Corporal Rosemarie Epiti assists with a security checkpoint on the road between the Musa Qala District Center and Himal. The FET was used to search women as needed.

At the Musa Qala District Center bazaar, the main business area, reactions to the female Marines ranged from polite curiosity to animosity; some men were offended by the presence of the FET members, Sell says.
National Sacrifice

ENVIRONMENTAL SCHOLARS CAST LIGHT ON THE DARK SIDE OF APPALACHIA’S ROLE AS THE HEART OF ENERGY PRODUCTION IN THE UNITED STATES

by FRANK STEPHENSON

Aerial view of dust swirling around a reclaimed mountaintop removal site.

PHOTO: LYNTHA SCOTT EILER / LIBRARY OF CONGRESS
When he recorded his now-epic lament about the destruction of Western Kentucky from coal mining in 1971, American folk singer/songwriter John Prine could not have known what lay ahead. A vast new horizon of coal production was on the verge of opening up in the United States, thanks to rising demand for cheap energy and scares over a suddenly fragile pipeline to Middle Eastern oil fields. Coal companies shifted gears and turned to a faster, easier, and more profitable means of pulling the shiny, black rock from Appalachia, America’s so-called “Saudi Arabia of coal.”

The industry turned to an extraordinary surface-mining technique that it had tried out in the 1960s in Eastern Kentucky. Known as mountaintop removal, no mining operation could be more aptly named. Instead of bypassing literally mountains of coal buried beneath the ancient, stony faces of Appalachian hills, engineers found that a few well-placed tons of high explosives could simply blow their tops off, laying their coal-studded insides bare for easy pickings. As a bonus for management, the highly mechanized process required far fewer hands than traditional strip-mining or deep-mining operations.

The technique soon spread across West Virginia, Tennessee, Ohio, and Virginia. By 1990, dozens of mountaintops throughout Appalachia were decapitated, their remains pushed into valleys, burying hundreds of miles of streams and exterminating wildlife. Today, various estimates by federal and independent agencies have put the total number of mountaintops leveled at around 500, a number that roughly translates into more than a million acres of clear-cut forest and up to 2,000 miles of destroyed or polluted mountain streams and rivers. Meanwhile, Peabody Energy—the company that Prine immortalized in 1971—has become the largest coal company in the world, doing business on five continents.

Geoffrey Buckley, Ohio University associate professor of geography, calls mountaintop removal “a textbook example of environmental injustice.” He and his Ohio University colleague Michele Morrone, associate professor of environmental health and director of environmental studies, are co-editors of a new book that joins the growing literature of Appalachian studies on the region’s historically beleaguered environment, economy, and culture. *Mountains of Injustice: Environmental and Social Justice in Appalachia* (Ohio University Press), is a collection of essays that casts fresh light on a socio-environmental dilemma that has plagued the region for more than a century.

For Buckley, who contributes a chapter to the book with former student Laura Allen on mountaintop removal, there’s no better starting point for illustrating “environmental injustice” than the latter-day phenomenon of erasing whole mountains in search of coal, a mineral that provides the United States with half of its electricity. The practice feeds on Appalachia’s remoteness (a national out-of-sight, out-of-mind mentality) along with its perennially job-starved, poorly educated citizenry with little political power.

“When you think of mountaintop removal, it’s such a devastating process,” Buckley says. “So very few people in the United States really know about it. What we’re doing to these mountains is really an injustice on several fronts for the people who live there.”

As notoriously destructive as it is, mountaintop removal is only one of the environmental traumas that rural Appalachia is forced to accept, a point that *Mountains* goes to some lengths to emphasize. The introduction to the book notes that citizen concern about the environmental impact of widespread timber harvesting—which created major flooding, erosion of valuable topsoil, and in some cases, even the loss of life—dates back to the 1890s. A chapter discusses these and other issues, including the decline of biodiversity, surrounding modern timber clear-cutting in the national forests of western North Carolina.

Another major issue facing Appalachia is the widespread siting of polluting chemical factories, landfills, and hazardous waste facilities—including radioactive sludge from nuclear power plants. Since the 1980s, Appalachia has been a dumping ground for garbage that couldn’t be legally placed elsewhere, the authors note.

Some of the book’s more chilling stories about the dangers of waste facilities concern accidents in which dams of toxic coal slurry—a byproduct of burning coal—collapsed. On October 11, 2000, an impoundment owned and operated by a subsidiary of the Massey Energy Company discharged an estimated 306 million gallons of sludge into the Tug Fork River in Kentucky. The spill polluted hundreds of miles of streams and fouled the drinking water of more than 27,000 residents. The U.S. Environmental Protection Agency reported that the spill was 30 times larger than the II-million-gallon oil slick produced by the Exxon Valdez disaster in 1989, the authors write. A similar incident in 1972 took a more drastic human toll in West Virginia: A torrent of coal wastewater killed 125 people, injured hundreds more, and left thousands homeless.

“Mr. Peabody’s coal train has hauled it away.”

Mr. Peabody’s coal train has hauled it away.”
Mountains of Injustice picks up on a socioeconomic phenomenon that first gained national attention in the early 1980s. Alarming reports of poor communities (largely African American) throughout the South becoming favorite sites for hazardous waste dumps and polluting manufacturing processes triggered cries of "environmental racism." A 1987 study sponsored by the United Church of Christ, Toxic Wastes and Race in the United States, proved even to skeptics that environmental racism not only was real but that the phenomenon was widespread and a de facto, if secret, policy in which both industry and government agencies were complicit.

Th.liga at study, along with others since then, tended to focus on cities where gross environmental disparities between largely segregated communities were obvious for anyone who cared to look. Landfills and incinerators somehow migrated in disproportionate numbers to black communities, as did parks and recreational facilities to predominately white ones. Buckley says the new study looks at what is happening now beyond city limits, in some of Appalachia's most rural communities now beset with many of the same problems that once were considered largely an urban phenomenon.

There's a big difference between manmade insults to urban environments and those inflicted on Appalachia's wild areas, Buckley says, namely that the former often can be cleaned up given enough money and time. Mountaintop removal, for example, leaves in its wake a permanently altered landscape that no amount of time or money can fix. It also creates the illusion of healthy economic growth, Buckley says, that powerfully fuels widespread public support for the practice by local communities hungry for jobs.

"This is where I see the real social and environmental injustice in all of this," he says. "Not only does this practice permanently destroy these people’s backyards, but because there are so few alternative economic opportunities for the people living in these areas, there are a lot of people who feel that they've got to support all this devastation because it means jobs."

While there's no argument that mountaintop removal creates jobs, the numbers show how the practice also helps eliminate them. At the peak of strip mining in Appalachia in the 1950s, the coal companies employed more than 150,000 miners. Today the number is less than 14,000, thanks largely to mechanization on a scale unheard of just 30 years ago.

"As the industry has continued to mechanize, most of these people (in rural Appalachia) simply don't have a future," Buckley says. "Some good, high-paying jobs will always be there, of course, but it's a drop in the bucket compared to what the communities got years ago in terms of economic benefits from this industry."

Buckley emphasizes the irony behind the economic argument that drives the practice as much as the relentless rise in domestic demand for power.

"In West Virginia, the poorest counties with the highest poverty rates also have the most surface mining. You'd think that selling all that coal would bring some money back to the counties, but in fact, by and large, the profits from these industries don't fall back into the region," he says.
...perhaps most damaging to some is the loss of emotional and spiritual attachment to the mountains that the Appalachian citizens call home.

GEORGE BUCKLEY

ZONES OF SACRIFICE

While Mountains takes its theme from the central environmental crisis now afoot across the heart of Appalachia, mountaintop removal, the book offers readers a much broader perspective that helps define the true sociological, cultural, environmental, and economic dimensions of life throughout the region as shaped by the coal mining industry today.

Stephen Scanlan, Ohio University environmental sociologist, contributes a chapter that summarizes the region's environmental and political history that has helped create what he believes may be “the most significant tragedy in Appalachia, if not the entire United States.” He puts into historical context what may well be the region's most famous characteristic—widespread, entrenched poverty. Scholars differ on how this debacle came to be (Scanlan holds that it’s a combination of a historic lack of regional development and a willingness to let powerful outside corporate interests decide what’s best for the communities), but the result is the same: Generations of economic malaise have woven a cultural fabric tailor-made for justifying the wholesale destruction of one's own land and heritage for a paycheck.

This is why Scanlan agrees with other researchers who call much of Appalachia a “national sacrifice zone,” a regrettable byproduct of the nation's insatiable demand for energy, coupled with the historic inability of Congress to establish a rational energy policy for the country. “We've simply decided to sacrifice these areas for the best interest of the country's energy needs,” he says.

Taken as a whole, Mountains can be seen as a testimonial to what many critics have been saying about Appalachia's environmental misfortune for years, namely that what's happening to the region and its people—largely by outside corporate forces aligned with compliant governmental regulators—is a consequence of what amounts to a critically important stratagem of an unwritten national energy policy. Buckley calls this a “national tragedy” that cuts through environmental issues and into the heart of social ones.

Addressing mountaintop removal specifically, he writes: "...perhaps most damaging to some is the loss of emotional and spiritual attachment to the mountains that the Appalachian citizens call home. With strong historical, family, and cultural ties to the land that has been reinforced generation after generation, there are real emotional scars (left on residents) who feel powerless to fight (the mining industry).”

Scanlan argues that, to the contrary, Appalachians aren’t powerless at all. For one thing, they need only to look at their long history of labor unrest, dating to bloody conflicts in the 1890s. As ugly as those early struggles were, they nonetheless eventually brought about fundamental changes that vastly improved the lives of workers throughout the region, he says. Efforts by the United Mine Workers Association and the labor movement led to the eight-hour work day, the right to form unions and bargain collectively, health and retirement benefits, mine safety regulations, and more.

While it’s obvious to him that “environmental justice is not on the corporate community’s agenda because of the need to keep the (power consumption) treadmill running,” Scanlan adds that Appalachians still “have a right not only to demand that their land not be pillaged and their streams filled in, but also that hazardous industrial sites not be (placed) in their communities.”

Ultimately, Appalachians might want to borrow a chapter from the civil rights movement of the 1960s, he says. “I make the analogy that the folks in Appalachia need to look beyond this as a regional issue; that they have to think of larger social changes like racial discrimination and use those kinds of parallels.”

(Top) A young boy walks across a polluted stream that runs by a weathered barn near Berea, Kentucky. (Above Right) An abandoned home after a sediment pond overflow flood in West Virginia.

PHOTOS: (TOP) BRUCE DALE / NATIONAL GEOGRAPHIC / GETTY IMAGES; (ABOVE RIGHT) MELISSA FALLOW / NATIONAL GEOGRAPHIC / GETTY IMAGES
Because of its conspicuously brutal footprint, mountaintop removal indeed has succeeded in turning hundreds of thousands of rural Appalachians—who would never describe themselves as environmentalists—into ardent and highly vocal foes of the practice. In September 2010, more than 100 protesters were arrested when they brought their anti-mountaintop-removal message to the capitol steps in Washington, D.C.

The Obama Administration has resisted calls for shutting down mountaintop removal entirely, despite publicly condemning the practice and having statutory and executive power necessary to stop it. Last January, the administration buoyed environmentalists’ hopes on the issue by retroactively revoking an EPA-awarded permit for a large mountaintop-removal project in Logan County, West Virginia. But the pace of change on the issue remains slow, frustrating mountaintop-removal foes who blame Washington’s formidable coal industry lobby for the president’s foot-dragging on the issue.

Mountaintop removal isn’t the only environmental issue prompting protests in the Appalachian region. Citizen outrage over the health threats posed by coal-fired power plants, chemical factories, and hazardous waste facilities has taken on a decidedly maternalistic tone.

In research for the book’s section “In Their Own Words,” Mountains co-editor Morrone discovered six activists—all mothers—who have devoted much of their lives to doing whatever they can to keep children, including their own, safe from environmental hazards. In “Housewives from Hell,” a chapter she co-wrote with former student Wren Kruse, she describes how these women share the same hopes, fears, and frustrations that come from being largely poor, undereducated, politically unsophisticated, and forced to live amid often frightful environmental carnage.

Yet they understand clearly what’s at stake in their communities—jobs, or at least the promise of jobs—and what citizens are willing to do or say to get them. This risky equation goes to the heart of their most common denominator—where do the lives and health of the communities’ children factor into the discussion?

That question is the motivation for activist Suzanne Wisdom, a member of an environmental organization working to eliminate mercury emissions at the Olin Corporation’s Chlor Alkali industrial bleach plant in Charleston, Tennessee. Pregnant women, nursing mothers, and children have been advised to avoid consuming largemouth bass from the river near the plant because of mercury contamination.

Caroline Beidler has protested the Eramet manganese refinery in Marietta, Ohio, over concerns that high levels of the compounds can affect neurological development in children. She describes the high numbers of small kids with asthma in her community, including those who need daily treatments with breathing machines.

And mom Lisa Crawford took up the cause against a uranium enrichment plant in Ohio after learning that her well water may have been contaminated by the pollutant over the course of several years. “I was extremely scared for my husband and I, and also for our little boy at the time. … There was this really big fear of how is this going to affect my child, how is it going to affect me if I want to have another child,” she tells Morrone and Kruse.

Morrone describes the women she interviewed as “fearless,” linked by an ironclad maternal instinct and an empathy for mothers throughout Appalachia who constantly worry about what toxins in the water, air, and soil may be putting their children at risk for the rest of their lives. They all share a mistrust of both industry and government officials and often are frustrated by a sense of powerlessness. None of them consider herself an environmentalist in the strictest sense of the term, Morrone found. Collectively, they are simply unaffiliated—and highly dedicated—moms on a mission.

“Mothers will do whatever it takes to protect their children and most won’t stand for unfair treatment in any aspect of their children’s lives,” Morrone writes. “The combination of protectionism and demand for justice makes women in general, and mothers in specific, a group of environmental activists to reckon with.”
LANDSCAPES OF CONSUMPTION

From any standpoint one can name—social, political, economic, religious, cultural—life in rural Appalachia has contributed enormously to the fascinating storyline of America’s ascent from colonial times. A cautionary note in Mountains of Injustice is that instead of being isolated from the rest of the country as many might think—and even more might want us to think—the region is more connected to the nation than it’s ever been.

Millions of utility customers around the country, for example, can thank the coal companies operating all the way from Pennsylvania to Alabama for either all or a major portion of their power. The vast majority of those customers live in cities that would shut down overnight without their connection to the coal-streaked hills of Appalachia.

The message of Mountains offers a new appreciation for how the urban-born concept of environmental injustice now manifests itself in the myriad, out-of-the-way hamlets of Tennessee, Kentucky, Ohio, Virginia, and West Virginia. But the book also shows how artificial the line is between urban and rural environmental inequities. In fact, regardless of how such inequities are defined—either as the result of racism, classism, or simply a benign indifference to the environment—the dynamics of both are joined at the hip. Buckley puts it this way in the book’s preface: “Our landscapes of consumption and landscapes of production are inextricably intertwined.”
Top brass

Think of tubas, and the image of a musician in a marching band exhaling the sound of “oompah, oompah” might come to mind.

But that’s not what audiences experience at a performance of Ohio University’s Tuba-Euphonium Ensemble, a unique collective of undergraduate and graduate students who enjoy defying the expectations of these large, low-pitched brass instruments.

“How often do you hear about a tuba ensemble?” asks student musician Jordan VonWahlde. “Even for tuba players, it’s unusual.”

The Tuba-Euphonium Ensemble is the brainchild of Jason Smith, an internationally renowned faculty member in the School of Music. Ohio University hired him in 1999 as the school’s first full-time tuba-euphonium professor, which allowed the school to form the faculty brass quintet OhioBrass.

When Smith first arrived on campus, there were only three tuba students. An active recruiter of high school musicians, he now mentors about 15 students—often music education, music therapy, or performance majors—per year. The student ensemble has performed at two international tuba-euphonium conferences, as well as the Midwest Tuba-Euphonium Conference.

The growth of the program mirrors a musical trend. Based on the popularity of the New York Brass Quintet, universities began hiring tuba-euphonium professors in the late 1950s to start their own ensembles. A growth in tuba-euphonium majors followed, and by 1973, the International Tuba Euphonium Association was formed.

The community remains a close-knit group. “It’s hard to find any tuba player on the planet that I haven’t had some contact with,” says Smith, the editor of the globe’s only scholarly tuba-euphonium publication, the International Tuba Euphonium Journal.

The Ohio University students who play in Smith’s Tuba-Euphonium Ensemble also say they enjoy the camaraderie that comes with membership in the world of these unique instruments. There’s often a common recruitment story:

A high school band director appeals to a trumpet or trombone player to make the switch to the larger tuba (or its smaller relative, the euphonium). VonWahlde says that there can be a stigma attached to the tuba, as some musicians perceive that the assignment is given to students who can’t hack other instruments.

“The idea that it’s just for the inadequate musicians is a knock against the tuba in general,” says VonWahlde, a senior from Westchester, Ohio. “I’d like to change that mentality.”

Once musicians become acclimated to the tuba or euphonium, they often discover that the instruments are far more musical than they anticipated.

“There’s so much music out there for it that’s different and interesting,” says Carolyn Milbaugh, a junior from Lancaster, Ohio, who previously played flute.

Smith’s ensemble pushes students to get creative with the instruments. Each spring, he assigns the students to adapt a piece of music for tuba or euphonium. VonWahlde chose “It Takes Four to Tango,” originally written for a bassoon quartet.

“It’s a really cool experience. We get an opportunity to understand what does and doesn’t work,” he says.

Not every piece lends itself to these baritone instruments—you wouldn’t play lush, romantic orchestral string music with a tuba ensemble,” VonWahlde notes—but when it does work, the ensemble can evoke a rich, dark tone that can surprise audiences.

“The best comment we get is, ‘I didn’t know tubas could do that,’” Smith says of the instrument’s unexpected versatility.

The students also stretch their expectations of their own musical capabilities. Nathan Cain, a junior from Springboro, Ohio, notes that Smith’s in-depth expertise with the instruments helped him refine his techniques.

“There’s a lot that he’s taught me that I never thought about before,” says Cain, who is also the head of the euphonium section of the university’s famed Marching 110.

Milbaugh has become more disciplined about practicing and honing new pieces. “Because the ensemble is smaller, you need to be on top of your music to avoid falling behind,” she says.

Developing arrangements and playing with the Tuba-Euphonium Ensemble is good preparation for careers in music education and therapy, the students say. As for those high school band musicians destined for the role of tuba player? They’ve got a generation of future band directors at Ohio University determined to make them the coolest kids in the room.
The American chestnut was one of the most important nut-producing species in the entire eastern deciduous forest," says Brian Atkinson, an Ohio University student in environmental and plant biology. "It supported huge populations of wildlife."

Ecologists now are working to restore the tree to its original population levels by breeding the American chestnut with a blight-resistant Chinese version. Atkinson is studying ways to aid the tree’s restoration in Ohio forests.

Protecting the chestnuts from predation is one of the biggest challenges in growing the hybrid chestnuts in the wild.

In his first study, Atkinson tested the effectiveness of deer guards against predators in a chestnut orchard at Dysart Woods Laboratory in Belmont County, Ohio. Deer guards, which resemble a plastic tube, were placed around half of the planted seedlings under study. The other half received no protection. Atkinson recorded the growth of the seedlings and documented the death rate at each site.

Though the guards didn’t impact the survival of the plants, the protected seedlings did grow significantly more than the ones without protection. The tubes may provide photosynthetic light penetration and create a microhabitat for optimal growing conditions, Atkinson says. The seedlings from one particular genetic line (of 11 tested) fared the best in the experiment, he adds.

In his second study, conducted at Waterloo Wildlife Experiment Station in Athens, Ohio, Atkinson found that a predator repellent treatment called "plant skydd" had no significant impact on the chestnut seeds’ success, compared to a control group.

A volunteer for the American Chestnut Foundation for two years, Atkinson is invested in reintroducing the chestnut to the wild. He and McCarthy have presented the results of the research at a scientific meeting to share their findings more widely with those in the conservation effort.
Ohio University artist Melissa Haviland explores upper-class tokens of wealth, such as fine china, through a feminist lens. Recent drawings, video works, and installations contemplate objects such as tea cups as symbols of class structure, family upbringing, social roles, and etiquette rituals. Two new grants will allow Haviland to travel to fine china factories to study the history and manufacturing of these iconic household items, as well as finish a video series on shattered tea sets.

:: My cup of tea

Ohio University artist Melissa Haviland explores upper-class tokens of wealth, such as fine china, through a feminist lens. Recent drawings, video works, and installations contemplate objects such as tea cups as symbols of class structure, family upbringing, social roles, and etiquette rituals. Two new grants will allow Haviland to travel to fine china factories to study the history and manufacturing of these iconic household items, as well as finish a video series on shattered tea sets.

(above) Melissa Haviland & David Colagiovanni  |  Video Still from “Music for Teacup,” 2010

(left) Melissa Haviland  |  “Contemplating a Need for Indulgence,” 24’ x 37’ large tent form (about 80 yards of hand-printed fabric and pvc), velvet cushion, a child’s porcelain tea set, flocked wallpaper, and a drawing created with black sand, 2009