

In Review



ONLINE EDUCATION

Cataloging a Course

SCREEN SHOTS: Musicologist John Covach (left) records a lecture for his course on the history of rock 'n' roll in Lower Strong. The course will be one of the first online, noncredit courses offered by the University through Coursera, one of the leading sites for massive open online courses, or MOOCs. The University joined Coursera this spring. In getting his lectures ready, Covach, the Mercer Brugler Distinguished Teaching Professor and chair of the Department of Music in the College as well as a professor of music theory at the Eastman School, was joined by communications associate Will Graver (camera) and Eric Fredericksen, the University's associate vice president for online learning. PHOTOGRAPH BY ADAM FENSTER



WOMEN IN MUSIC

String Scene

HARP HARMONY: An ensemble of harpists performs *Anthill*, a work by composer Catherine Kontz, in a noontime concert in the Main Hall at the Eastman School. Part of Eastman's annual Women in Music festival in late March, the performance was one of several featuring concerts, rehearsals, coaching sessions, lectures, and presentations. This spring's guest composer was Melinda Wagner, who won the 1999 Pulitzer Prize for her *Concerto for Flute, Strings, and Percussion*. PHOTOGRAPH BY ADAM FENSTER







MEDICAL SCHOOL

And the Residencies Go to ...

MATCH DAY: Gener Augustin '13M (MD) is embraced by Ashley Slaughter, a third-year medical student, after Augustin learns she will undertake a residency in vascular surgery at Case Western Reserve University. The moment came during this spring's Match Day celebration at the School of Medicine and Dentistry, an event when nearly 100 members of the school's Class of 2013 discovered where they will complete the next step of their medical education. The blind process is conducted by the National Resident Matching Program and is designed to try to place doctors into programs according to their interests and their preferences for placement. **PHOTOGRAPH BY ADAM FENSTER**





HUMANITIES

Schismatics, New and Old

The Ferrari Humanities Symposia looks at the Reformation.

By Kathleen McGarvey

A 16TH-CENTURY SCHISM IN CHRISTIANITY might seem an unlikely source for a historical movement the reverberations of which continue to be felt today. But the Reformation, which left turbulent warfare and profound changes in religious and secular thought in its wake, had just such effects. When the *Ninety-Five Theses* of German cleric Martin Luther were posted on the door of the Castle Church of Wittenberg in 1517, in protestation of the sale of indulgences—to pay for the rebuilding of St. Peter's Cathedral—by the Roman Catholic Church, that action put in motion a splintering of the faith and the creation of Protestant churches.

This spring, the Ferrari Humanities Symposia took the Reformation as their focus, examining not just the rise of Protestantism and the corresponding Catholic Counter-Reformation, but also the technological, political, social, and economic changes that the Reformation ushered in, touching on science, medicine, law, art, education, and moral and ethical thought.

The symposium included a two-credit course, *Reformations in Western Thought*, and featured lectures from leading scholars of the Reformation: Susan Schreiner, professor of the history of Christianity and theology in the Divinity School at the University of Chicago; James Simpson, the Donald P. and Katherine B. Loker Professor of English at Harvard; and Diarmaid MacCulloch, professor of the history of the church at Oxford.

What has the Reformation wrought? A few of the participating faculty members offer their perspectives on the changes

brought about by the Reformation, and how we feel them still.

Dorinda Outram

*Franklin W. Clark and Gladys I. Clark
Professor of History*

The Reformation divided a hitherto nominally united Latin Christendom. And with the emergence of Protestant churches emphasizing individual reading of scriptural texts, literacy becomes important. This helps people to internalize the word of Christ and the religious messages of the reformers.

Still unclear, however, is the actual tipping point of religious change; it is too easy,

▲ **REFORMATIONS:** A series of academic programs this spring explored the technological and social changes inspired by the ideas of Martin Luther—above, depicted burning an announcement of his excommunication—and others of his era.

given the long prior history of discontent with the Catholic Church, to ascribe everything to Luther's theses in 1517.

Thomas Hahn

Professor of English

In insisting on the need for widespread change in their own lives and in the culture at large, many of the voices of the Reformation (and the Catholic response, in the Counter-Reformation) articulated a sense of "religious values" that resonates strongly with contemporary events and movements. Recent evangelical movements in Africa and elsewhere in World Christianity clearly reflect that original impulse.

Beyond the boundaries of Christian practice, the Reformation raises questions about how we understand the origins and impact of religious sentiment, whether as grassroots spontaneity or top-down policy control: the Arab Spring and the civil war in Syria or the spreading capitalist reform of China versus the failed Cultural Revolution model some of the difficulties we face in handling the historical dimensions of reformed cultural change.

Finally, there is the central issue of the nature of change itself: from a Confucian, Hindu, or even a Muslim perspective, the major divisions within Christianity, let alone the fine distinctions among Protestant sects, may seem hard to parse, yet on any view the Reformation was clearly a central component of internal historical changes that dramatically redefined Western identities.

Curt Cadorette

John Henry Newman Associate Professor in Roman Catholic Studies

Martin Luther was a medieval person in many respects, who saw the social order as divinely constructed. And the Peasants' War—an uprising in Germany in 1524–25 inspired by Reformation thought—made his conservative social values really kick in.

The idea that the Reformation says you can believe what you want is a misperception. And the only true egalitarians of the period were the Anabaptists, who believed in radical equality. Fear of anarchy brought Luther's intolerance to the fore. Theoretically, the Reformation is a statement of Christian equality, but practically, how do you implement that? The question leads to religious violence in the 17th century.

John Calvin and Luther say you can and should—Calvin would go so far as to say you must—read religious materials. But

EXCERPT

An 'Extraordinary, Civilized Declaration'

Oxford historian Diarmaid MacCulloch delivered the keynote address of this year's symposium, "Toleration in Reformation Europe: Laughter Versus Tidy-Mindedness." In his lecture, he called attention to a little-noted model of religious tolerance in 16th-century Europe:

The Diet, or parliament, of Transylvania met in the town of Turda in 1568, in the parish church, which you can still go and visit, now Roman Catholic again, but at that stage was the meeting place of a Diet that decided to give total choice to the people of Transylvania, parish by parish. It recognized the legal status not just of Catholics, Lutherans, and Reformed, but by implication, by omission, by silence, also anti-Trinitarians, and it made this splendidly trenchant declaration: ministers everywhere should preach the gospel according to their understanding of it, and if their community is willing to accept this, good. If not, however, no one should be compelled by force if their spirit is not at peace. No one is permitted to threaten, put in prison, or banish anyone



KEYNOTE TALK: Historian Diarmaid MacCulloch discussed toleration and the Reformation.

because of their teachings, because faith is a gift from God. Transylvania, 1568. What a shame we remember Transylvania by someone who was never there, Count Dracula, instead of that extraordinary, civilized declaration.

For a video of the talk, visit the symposia's website: www.rochester.edu/college/ferrari-symposia/.

these are very complicated documents. Luther and Calvin say to pick up a text, read it, and your interpretation—arrived at in light of your neighbor's well-being—is legitimate. That leads to one of the wonderful

Symposia Founders

Trustee Bernard Ferrari '70, '74M (MD) and Linda Gaddis Ferrari established the annual Ferrari Humanities Symposia to broaden the liberal education of Rochester undergraduates, enhance the experience of graduate students, and expand the connections of University faculty with other scholars from around the world. The symposia include lectures by visiting senior scholars of humanistic thought with an emphasis on the Renaissance period, intensive short courses taught by faculty members from across the University, and focused study in reading groups and similar endeavors.

aspects of the Reformation: pluralism. It was a frontal challenge to the hegemony of the Catholic system.

A good example of where the effects of the Reformation are still being felt is in the Supreme Court case involving the constitutionality of the Defense of Marriage Act.

Some people see the Defense of Marriage Act as defending a traditional understanding of marriage with a religious dimension, drawing on the Hebrew Bible, or Old Testament, to conclude that God says marriage should be between a man and a woman.

Others, arguing from the perspective of John Locke, say religion shouldn't define this union—and if people are willing to fulfill the obligations of such a union, why shouldn't they enter into it?

Locke says in his "Letter Concerning Toleration" that we must agree to disagree and there is no right to impose religious premises on other people. In some ways we're still living out 17th-century religious issues. **R**



The Cold Shoulder Freezes All

A new study by Rochester researchers shows that ostracism cuts both ways: those who deliberately shun someone feel as distressed by the experience as the victim.

Researchers found that complying with instructions to exclude another person leads most people to feel shame and guilt, along with a diminished sense of autonomy. Doctoral candidate Nicole Legate led the study, which was published in the journal *Psychological Science*.

To capture the dual dynamics of social rejection, the researchers turned to Cyberball, an online game developed by ostracism

researcher Kipling Williams of Purdue. The researchers randomly assigned 152 undergraduates to one of four game scenarios. In the “ostracizer” group, one of the “virtual” players—actually part of the experiment and preprogrammed to play fair or play mean—excluded the other virtual player and the study participant was instructed to exclude the same player. In the second scenario, the tables were turned to freeze out the study participant. Before and following the game, participants completed a survey to assess their mood and sense of autonomy, competence, and relatedness.

Consistent with earlier re-

search on ostracism, the study found that being shunned—even by faceless strangers in a computer game—was upsetting and lowered the participant’s mood. “Although there are no visible scars, ostracism has been shown to activate the same neural pathways as physical pain,” says coauthor Richard Ryan, professor of clinical and social psychology.

But complying with instructions to exclude others was equally disheartening, the data showed. The study suggests that the psychological costs of rejecting others are linked primarily to the thwarting of autonomy and relatedness. —Susan Hagen

The Doctor Is ‘Virtually’ In

A new study in the journal *JAMA Neurology* shows that telemedicine check-ups for people with Parkinson’s disease can provide effective care and generate a significant benefit. “Virtual” visits with physicians—in which patients participate from the comfort of home—demonstrate that quality specialized care can be delivered effectively to people in remote locations.

The complex combination of behavioral, cognitive, and physical symptoms of Parkinson’s often demands that patients receive care from a specialist in neurological disorders. But such specialists tend to be found at larger medical centers.

A seven-month study of patients receiving either in-person or video-technology care showed that patients who received virtual house calls did as well as those who received in-person care, and appointments consumed less of their time: an average of 53 minutes versus 255 for in-person care patients when travel was included.

Led by Kevin Biglan, associate professor of neurology, the study suggests the potential of providing remote care. But there are barriers to widespread adoption of the model, including licensing and reimbursement when providing care across state lines.

—Mark Michaud

Exploiting Subtleties in the Uncertainty Principle

Physicists at Rochester and the University of Ottawa have applied a recently developed technique to measure directly the polarization states of light for the first time. The paper was published in *Nature Photonics*.

Robert Boyd, who has appointments at both Rochester and Ottawa, led the researchers as

they measured the polarization states of light—the directions in which the electric and magnetic fields of the light oscillate.

The group’s key result, like that of the Canadian team that pioneered direct measurement in 2011, is that it’s possible to measure directly key related variables, known as conjugate

variables, of a quantum particle or state. Such direct measurement of the wavefunction—a way to determine the state of a quantum system—had long seemed impossible because of a key tenet of the uncertainty principle: that certain properties of a quantum system could be known only poorly if certain other re-

lated properties were known with precision. The ability to make such measurements challenges the idea that full understanding of a quantum system could never come from direct observation.

The results may have implications for future work in quantum information science.

—Leonor Sierra

Are Some Brain Injuries Actually Autoimmune Responses?

Brain degeneration exhibited by people who've received repeated, subconcussive head blows may be the result of an out-of-control autoimmune response, researchers say. If that hypothesis is accurate, it may open the door to investigating a vaccine or drug therapy to prevent head trauma.

Jeffrey Bazarian, associate professor of emergency medicine, worked closely with lead investigator Damir Janigro, professor of molecular medicine at the Cleveland Clinic, and 67 college football players from Rochester

and northeast Ohio who agreed to participate in the research. The study was published in the journal *PLOS ONE*.

The team looked at the blood-brain barrier, a tightly woven system of capillaries that filters the flow of biological substances between the brain and the rest of the circulatory system. The researchers found that with repeated blows to the head the barrier opens slightly and allows some proteins to escape from the brain into the bloodstream.

A well-accepted protein

biomarker for traumatic brain injury, S100B, was present in varying degrees in the blood samples of the 67 football players after every game—even though none had suffered a concussion. The finding indicates that even the most routine hits may have some impact on the blood-brain barrier and possibly the brain itself.

The group also discovered that the body views the biomarker as an enemy and begins to form antibodies against it as if it were a virus, noting that some antibodies sneaked back through the

barrier to the brain and began to harm the healthy brain cells that produced the protein in the first place. Finding that S100B accumulates in dendritic cells, which regulate autoimmune responses, the researchers reason that if the blood-brain barrier repeatedly opens during the football season, the stage may be set for a continuous autoimmune-type attack on the brain.

Bazarian hopes the work will ultimately help lead to a tool to screen for concussions.

—Leslie Orr



ACHILLES' HEEL? Researchers have found a weakness in drug-resistant *E. coli* bacteria.

Superbugs May Have a Soft Spot

The overuse of antibiotics has created strains of bacteria that are resistant to medication, making the diseases they cause difficult to treat—and even allows some infections to become deadly.

But a research team has identified a weakness in at least one superbug that scientists may be able to exploit medically.

Gloria Culver, professor and chair of the biology department, and Keith Connolly, now at Harvard, thought one key to stopping the bacteria may lie with proteins, so they studied the mechanism behind the develop-

ment of bacterial ribosomes, the cell's protein-manufacturing machine, in *E. coli*.

They discovered that two proteins already present in *E. coli* cells—RbfA and KsgA—need to be in balance in order for ribosomes to function. If they're present in the wrong concentrations, the ribosomes won't mature properly and will be unable to produce proteins, causing cell death. The findings are published in the journal *Molecular Microbiology*.

The researchers' next goal is to find a way to disrupt the balance between the proteins.

—Peter Iglinski

Glial Cells Make Mice Smarter

A family of cells found in the human central nervous system that were, until recently, considered mere “housekeepers” now appear to be essential to the unique complexity of the human brain.

Medical Center scientists have demonstrated that human glial cells, when transplanted into mice, could influence communication within the brain, allowing the animals to learn more rapidly.

Published in the journal *Cell*

Stem Cell, the study suggests that the evolution of a subset of glia called astrocytes—which are larger and more complex in humans than in other species—may have been one of the key events that led to the higher cognitive functions that distinguish humans from other species.

Medical Center researchers have been pioneers in unlocking the secrets of astrocytes and demonstrating that they not only support the neurons in the

brain, but also communicate with neurons and with each other.

Steven Goldman, the Edward A. and Alma Vollertsen Rykenboer Chair in Neurophysiology, and Maiken Nedergaard, the Frank P. Smith Professor of Neurosurgery, are co-senior authors of the study.

When researchers transplanted human brain cells into the brains of newborn mice, the human glia cells outperformed those of the mice while leav-

ing the existing neural network intact. The cells performed as they would in a human brain—with the end result of smarter mice that learned more rapidly, acquired new associations, and performed tasks faster than mice without the human boost.

Goldman calls the findings the first proof that human glia have a “species-specific role in intellectual capability and cognitive processing.”

—Mark Michaud

ENGLISH

Paying Attention—Slowly

How does poetry shape our understanding of language, creativity, and excellence, asks poet James Longenbach.

Interview by Kathleen McGarvey

“THE BEST POEMS EVER WRITTEN CONSTITUTE our future,” writes James Longenbach, the Joseph Henry Gilmore Professor of English, in opening his new book, *The Virtues of Poetry* (Graywolf Press, 2013). “They refine our notions of excellence by continuing to elude them.”

In interlaced chapters, Longenbach considers the almost magical powers, or virtues, that poems can enact through the most ordinary means: among them, compression, dilation, intimacy, and otherness. He leads readers, with attention to the smallest inflections of language, through works by such poets as Shakespeare, Yeats,

You’re both a literary critic and a poet. How did those roles influence the book?

All poets of any worth are superb critics. They may not necessarily write their criticism down formally, but you have to have read a thousand poems carefully in order to write just one, and you have to have investigated them and felt yourself being fascinated by how their language works. So I don’t feel different from any other poet. Some poets write a lot of criticism and some don’t, but I don’t think their minds work differently.

I also think—and this is something I press upon my students—the writing of good prose sentences is a rigor that any poet benefits from, not because of what you’re

to be, and that every example of excellence you may have accumulated will not ensure that any of those modes of excellence will succeed in the next poem. Neither will they prevent the next poem from exhibiting a kind of charisma that is unprecedented in your experience of poetry.

In these essays, you give significant attention to the process of reading poems.

Because I’m at pains to get my students to read the language of a poem very closely, I say to them—and I mean this as a challenge; it’s not absolutely true, but it’s almost true—that if we talked about a poem long enough, it would be impossible for us to disagree about it: we would have described the language so carefully, so specifically, that we wouldn’t have anything to argue about. That’s not utterly true, but it’s amazing how true it is. You teach *Ham-*

This conflict seemed important and true to me: that you can’t legislate quality, or more perniciously, greatness—that the very quality that makes one poem fascinating and gripping and lasting might be the very thing that ruins another poem. This conflict became the book’s framing notion.

Dickinson, Marvell, Whitman, Blake, and Ashbery, and finds within them examples of the endlessly diverse powers of language.

What prompted you to write the book?

A contradiction. I found that when I was thinking about one particular poem, I would be talking about what made it interesting, worthy of attention, and so on; but then I’d be thinking about a different poem, and I’d realize that I would be talking about qualities that were inimical to the qualities that made the other poem interesting. This conflict seemed important and true to me: that you can’t legislate quality, or more perniciously, greatness—that the very quality that makes one poem fascinating and gripping and lasting might be the very thing that ruins another poem. The conflict became the book’s framing notion. It was hard to figure out a structure for the book that would be true to the conflict, for how do you turn this notion of not being able to have a generalizable recipe for excellence into an argument that doesn’t itself seem like a recipe?

writing about, but because you’re making shapely sentences into shapely paragraphs. This is something that fuels the writing of poetry.

You write about “excellence” as something that takes many forms in poetry. What do you mean by excellence?

It’s not a word I’m really happy with, and it occurs mostly in the preface, when I was forced by the occasion of making a coherent book to write a very pithy account of what the book does. I’m much happier with the more elusive and mysterious word “virtue,” which carries the connotation of something magical—though I don’t mean to speak about magic. I mean to talk about qualities of language in poems that we can discuss in rational ways. The impetus behind a poem might be very mysterious and strange, but the act of writing a poem is a very knowable, rational process: shaping the raw material of a language into a set of patterns. I hope it’s clear I was at pains to say you can’t ever really know what excellence is going

let year after year after year, and what’s remarkable is not that people think different things about it—what’s far more remarkable is that by and large everybody thinks the same things about it. The pressure the object exerts on you is far more mysterious than the fact that we have varying responses to the object. And it’s harder to describe.

Who’s the reader you’re addressing in this book? Are you writing for people who’d like to be poets?

In a sense, you could say that the book is written for people who want to write poems; however, that’s a subset of people who want to read poems. The act of writing and the act of reading are almost impossible to separate from each other, and you simply cannot be a writer without being a voraciously scrupulous reader. Throughout the book, I’m speaking to someone who wants to write only inasmuch as I mean to be speaking to someone who really, really loves—or wants to learn how it feels to love—the act of reading a poem with

intensity and, therefore, pleasure. That pleasure often makes one feel creative, and maybe it will make one write a poem—or not. It almost doesn't matter.

You mention in the book that Andrew Marvell's poem "The Garden" is a special one for you, that "everything I love about poetry is epitomized by this poem. It is as if the poem were a house I'd lived in all my life without knowing it." What makes a particular poem especially meaningful for a particular reader?

I may be speaking productively with a forked tongue, because I always want to insist to myself, and insist to a reader, and insist to any student that one must try to be available to every kind of poem that you could possibly avail yourself of, especially the ones that you think you don't like. Those are the ones that you have to return to, because if you don't like a poem, that probably means there's something wrong with you, something limited about you. Ideally, if we were the best possible readers, we would find everything inspiring. But because we are inadequate readers, we don't like certain things.

Of course there are going to be times when we don't like something or can't figure out how to enter it, but as much as possible, you want to try to keep that thing on the table. The fact that you don't like it ought to keep bugging you—especially if somebody else who's smart and interesting does like it. So given this goal of radical openness, then inevitably there are going to be some works of art that for some reason appeal to you more deeply, more intrinsically. It's hard to say why. Perhaps even more mysterious and more wonderful is when one feels one's deepest inclinations changing, when a poem—or an anything—that one has not found inspiring for years suddenly rears up its head, and you say, "Oh, my God. I *require* this. Where has this thing been all my life?" Well, it's been right in front of me. Where have I been all my life?

Do your students come prepared to do close reading? It doesn't seem

there's a lot in the contemporary world to encourage that skill of careful attention.

They do come prepared to do it, and then they do it, because in my classroom they've got to do it. And students don't have trouble with that. Students in my experience are attracted to difficulty. When I teach my course on James Joyce's *Ulysses*, that's generally the biggest enrollment I get, usually 60 or 70 kids, and it's not because the course fulfills requirements or anything. I think the human brain craves difficulty.

Reading poems is a very good way to improve the mind, because, especially if you're dealing with lyric poems, you're sitting there looking very closely at this little patterned collection of, what, 43 words? And you have a lot of time really to focus in on those words and not let yourself go somewhere else. Often—usually—in a typical

hour and 15 minute class, I'll never cover more than two or three poems. Sometimes, only one.


The literary critic Richard Poirier always spoke of how he preferred the phrase "slow reading" to "close reading," and I like that, too. I think "slow reading" seems like a better metaphor—it's what poems demand, and it's why people who don't generally read them sometimes feel kind of mystified by them: poems ask for a slowness of attention that, if you're just used to reading language as a disposable vessel for information, you're not used to exercising. Students learn how to be unintimidated by that slowness, how to inhabit it, how to glean things from it, how to enjoy it: that's the extremely useful, universally applicable skill that comes out of reading poems. So finally, I think it's most important simply to learn how to like poems, how to be devoted to poems, and if I have one overriding pedagogical goal, it would be no bigger than that.

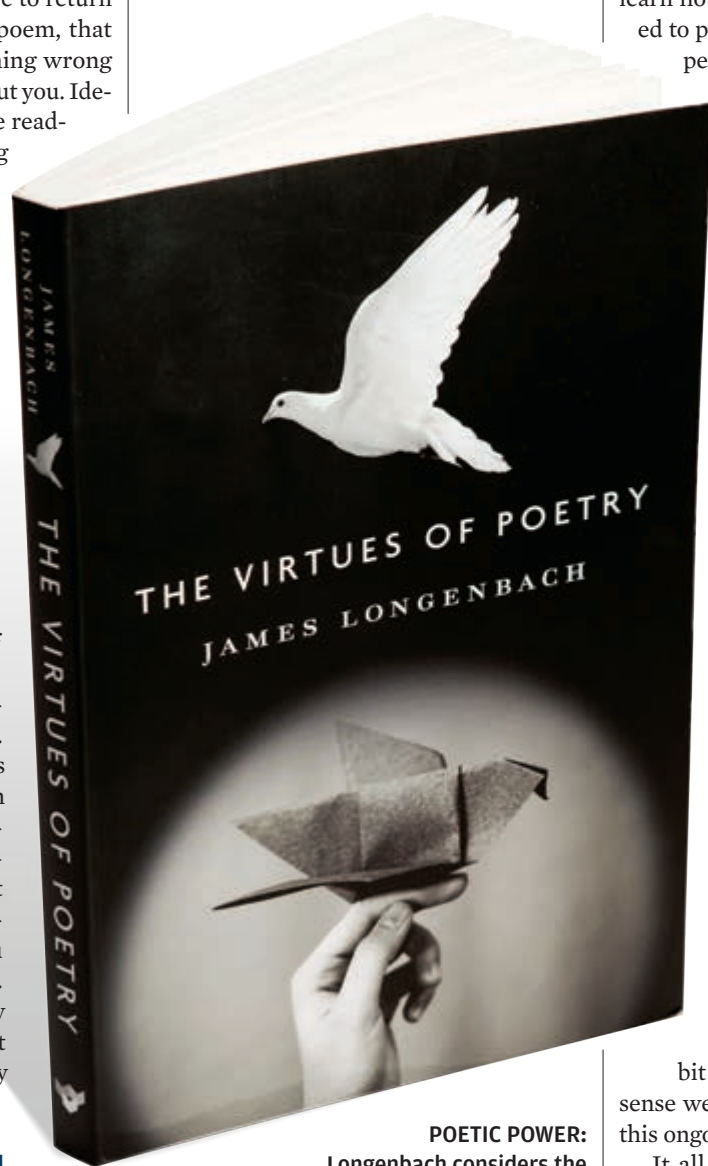
What gives a poem lasting influence?

We think of 400 or even of 50 years as being a long time. But in the history of art, that's nothing. Most of the art that's produced in any 100-year period is totally forgotten. And none of us will live long enough to know what art will last from the moment in which we live. We generally read, if we're well read, maybe eight or nine poets from the 19th century, which ended only 113 years ago. And so which eight or nine are going to last from the 20th century? I can think easily of 30 that seem really, really good. That's scary.

But while only a little bit lasts, it takes a great many people to produce that little bit, and the minor figures who may be forgotten are important. They may not end up being an important part of the story, but they're an important part of the event. It takes a lot of people being interested in the production and reception of art—or of anything—to make that little

bit of lasting achievement. So in that sense we're all really noble participants in this ongoing enterprise.

It all sounds so high-minded, doesn't it? 



POETIC POWER: Longenbach considers the powers of poetic language.

MEDICAL ETHICS

Building a Better Brain?

Is it wrong to use drugs to enhance your brain's performance? Are you really acting as yourself when you do? **Richard Dees**, associate professor of philosophy, examines issues of health care ethics—especially the use of medicine to make ourselves feel better than we feel normally. He investigates the ethical implications of modifying our brains to improve memory, thinking, moods, and personality.

Are there already drugs available to enhance our brains?

Absolutely. There are stimulants to improve focus, attention, and memory—and to improve motor tasks. Already 30 percent of students, according to current estimates, use such drugs. There are medications to regulate moods and emotions. Prozac and beta blockers are some of the best known examples. Selective serotonin reuptake inhibitors—more commonly known as SSRIs—make people less aggressive and more cooperative. Oxytocin helps people be more trusting and so can enhance care-giving.

What kinds of ethical questions does their use raise?

There are various arguments you can make in support of their



use, such as people's right to autonomy, with the caveat that their actions can't cause harm to others. There's also the consequentialist argument: that people will be happier and more productive if they can use these drugs. You could also argue their use is inevitable, because of market forces and demands.

But if their use is immoral, then we should oppose it.

Is it immoral?

There are several categories of possible objections. First is safety. But that's a concern that can be overcome. It's a matter of caution, but not an objection of principle.

What about coercion?

The worry is that people will feel compelled to take drugs just to keep up. But we already accept many subtle coercions in employment—for example, the necessity of a college education. And our objection to coercion depends on what is being coerced. Most of us don't view coercion to quit smoking as such a bad thing.

Another objection you could raise is authenticity—that the medicated person isn't a "true self." But we often seek out such changes. And sometimes we see an altered self as our true self. A person on Prozac doesn't necessarily believe that his depressed self is his true self, for instance.

So where do you come down?

A drug can produce contentment, and perhaps the means to happiness. But it can't produce happiness—which isn't simply a feeling, and which requires the possibility of real failure. Enhancement drugs are morally suspect if they cut us off from the world and therefore from the possibility of failure. For safety reasons, we should be wary of enhancements now. And we should reject drugs that prevent us from having truly human experiences.

—Kathleen McGarvey

PSYCHOLOGY

Taking the Stress Out of Stress

Feeling stressed? **Jeremy Jamieson**, assistant professor in the Department of Clinical and Social Sciences in Psychology, says that's not necessarily bad. In fact, a pounding heartbeat and butterflies in your stomach might actually be setting you up for success.

What happens when we're stressed?

A lot of our stress responses deal

with social stressors—and those responses are built on the biological architecture that was there to deal with physical stressors. And so physical threats, social threats—our bodies treat those like the same thing.

There are two broad types of stress responses that we call challenge and threat. In challenge, your body is enacting changes to help you go and ad-

dress something, with increased blood flow to our arms, our legs, our brain, the major muscle groups that help to address stressors.

Threat response is the opposite. The expression "cold feet" comes from the way our vasculature constricts down, cutting the blood flowing to our hands and our feet. Your body is seeking to center blood in the core of the

body, because if you're physically threatened, you're more likely to be injured in your limbs than your chest. With blood in your core, you're less likely to bleed to death.

How do most people interpret stress?

We have chronically negative appraisals of arousal and stress in general. When our heart

DERMATOLOGY

Made in the Shade

About half of people who live to age 65 will have skin cancer at least once. Heading into the sunshine of spring and summer this year, what's a prudent person to do? **Mary Gail Mercurio**, professor of dermatology who treats many patients with skin cancer at the Medical Center, sheds a little light on the subject.

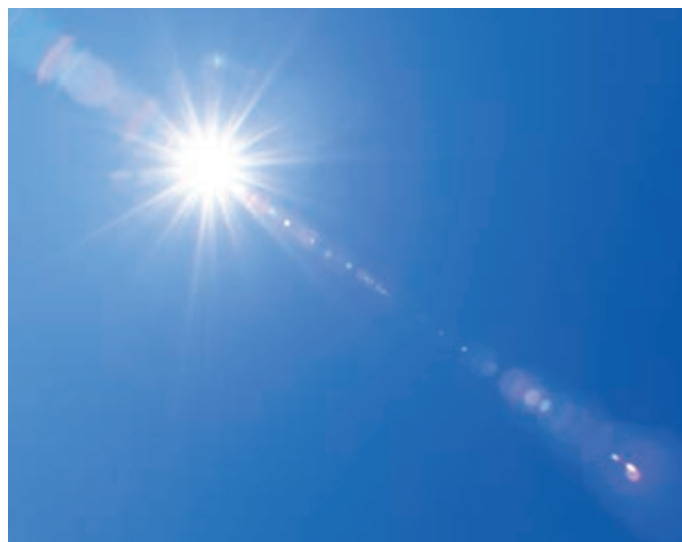
What's the greatest misconception about sun exposure that you encounter?

That indoor tanning is safe. Studies have confirmed that even a few indoor tanning sessions significantly increase the risk of all three of the most common forms of cancer—basal cell carcinoma, squamous cell carcinoma, and melanoma—as well as premature aging of the skin. Contrary to what's touted by the indoor tanning industry, there's no such thing as a "safe tan."

How does sunblock protect skin? Is it as protective as covering up with clothing?

Sunblock is only one part of a comprehensive sun protection regimen. Studies have shown that many people apply only half, or even less, of the amount of sunscreen needed to meet the rating on the package. And it's

easy to miss body parts such as the tops of the ears and the feet. Clothing offers more effective protection—but heavier, more tightly woven fabrics aren't practical in the heat. There are lighter fabrics now that block both ultraviolet A and B (UVA



and UVB) rays. Widebrimmed hats protect the most vulnerable skin on the scalp, neck, and face. Avoiding the midday sun and seeking the shade help, too.

Is there an advantage to higher SPF numbers once you get above 30?

The higher the number, the more

protection—but the SPF number only refers to one type of ultraviolet rays, UVB. The Food and Drug Administration is soon to release new labeling guidelines to incorporate a labeling scale for UVA, too. Thirty is the magic number recommended by most

dermatologists. Most important is to apply sunscreen often and in sufficient quantity.

What about those who've had blistering burns—what should they look out for?

That would be me. My friends and I spent our youthful upstate New York summers basted with

baby oil. Now my contemporaries are seeking the best cosmetic treatments to erase the damaging effects of all that sun. Efforts to reverse sun-induced premature aging is a multi-billion dollar industry. Many of my young women patients are more willing to heed my advice about protection when they hear about wrinkled, leathery skin while they deem themselves invulnerable to cancer. Warning signs include new or changing moles, sores that don't heal, or new growths.

Is sun protection in children all about prevention, or do you sometimes find skin cancer in the very young?

In children, it's mainly about protection, although I have seen several skin cancer patients in their 20s—mainly those who use tanning beds. Sun protection strategies really need to be established early to become routine. I liken it to buckling up with a seatbelt. Most parents are vigilant about sun protection for their infants, but it seems to drop off after that, especially in the teenage years, when not wearing sunscreen is a means of showing independence.

—Kathleen McGarvey

rate increases or our hands are sweaty, these are actually just signs of general physiological arousal. We think it's a bad thing when the sympathetic nervous system is activated—but it isn't. But once you make that negative label, that's going to produce a threat response, because it's implying you don't have the ability to cope. There's a strong link between the brain and the

body, and any change that we have in our minds has direct consequence for what happens downstream in our bodies, and vice versa, too. It grows out of the biopsychosocial model, which was developed at Rochester.

What have you found in your research?

One of the main prongs of my research program is looking at

how stress impacts decisions and cognitive performance. We try to get people into high-stress situations and teach them how to reinterpret the meaning of their stress response.

So what's your advice for a student headed off to take a test, for example?

If you have completely flat affect, that might be better than

being in a really strong threat state—but it's not good. There's a reason why our body responds like this. You're going to have this increase in arousal. Your heart's going to be beating faster. Your body's trying to get blood to your brain. It wants to get oxygen to places where you're going to need it. And that can help you do well.

—Kathleen McGarvey



LEADING RESEARCH: Clark is the new senior vice president for research.

Hajim School Dean to Oversee University's Research Efforts

Rob Clark, dean of the Hajim School of Engineering since 2008, has been named senior vice president for research, a new position charged with shaping the initiatives and infrastructure of the University's growing research enterprise. Clark has also been appointed to a second, five-year term as dean of the Hajim School.

Serving in the research post on an interim appointment since last summer, Clark orchestrated a comprehensive review of information technology, supervised efforts to pilot online programs, and helped secure \$5 million of support for the University's Health Sciences Center for Computational Innovation.

As Hajim School dean, Clark is credited with growing and strengthening the faculty, introducing cross-disciplinary master's programs, and significantly increasing undergraduate enrollment in engineering. Clark joined the University in 2008 from Duke, where he was dean of the Pratt School of Engineering.

Lymphoma Specialist Named to Lead Wilmot Cancer Center

Jonathan Friedberg has been appointed director of the Wilmot Cancer Center. A hematologist and a national leader in lymphoma care and research, he joined the Medical Center in 2002 and was named chief of the Division of Hematology and Oncology in the Department of Medicine in 2009.

Friedberg has served as acting director of the Wilmot Cancer

Center since last July. As director, Friedberg intends to focus the development of the center along four strategic priorities: extending services to patients throughout the region, embracing multidisciplinary care, serving the community through outreach and advocacy, and developing a new strategic plan for research that focuses on cancer vulnerabilities, solid tumors, hemato-

logic malignancies, and cancer control and survivorship.

Medical Center CEO Bradford Berk '81M (MD/PhD) and Mark Taubman, dean of the School of Medicine and Dentistry, also reaffirmed the 2012 appointment of Hartmut (Hucky) Land as director of research and codirector of the center. Land will work with Friedberg on the center's strategic plan.

New Director Heads Medical Faculty Group

Trauma surgeon Michael Rotondo has been appointed chief executive officer of the University's Medical Faculty Group.

Rotondo, a Rochester native and son of the late Richard Rotondo '49, returns to the area from University Health Systems of East Carolina, where he was surgery chair. Leading the 1,000-physician faculty group will consume 80 percent of Rotondo's time. He will also be appointed senior associate dean of clinical affairs, professor of surgery, and associate vice president for administration at Strong Memorial Hospital. In addition, he will serve as a member of the Division of Trauma in the Department of Surgery.

Orthopaedics Ranks First for NIH Funding

The Department of Orthopaedics and Rehabilitation has been ranked first in the nation in National Institutes of Health funding for orthopaedics research, according to data released by the Blue Ridge Institute for Medical Research.

The Center for Musculoskeletal Research received \$4.86 million in peer-reviewed NIH research grants in 2012, surpassing institutions such as Johns Hopkins, Duke, and Washington University. At a time when research dollars are becoming scarcer, the center increased its funding by 30 percent over the previous year. Since 2005, it has consistently ranked among the top five NIH-funded musculoskeletal programs in the country, and ranked second in orthopaedics funding for the past four years.



University Honors Award-winning Soprano Jessye Norman

HIGH DEGREE: Jessye Norman, one of classical music's most storied performers, received an honorary degree from the University during an April concert in Kodak Hall at Eastman Theatre. Widely

recognized for her artistry and her humanitarianism, Norman was one of several guest artists who performed in a benefit for the Rochester nonprofit organization Action for a Better Community.

Security Services Introduces Its First Peace Officers

The first group of University security officers with expanded authority as peace officers will begin working on campus later this year. An initial class of 25 members of the Department of Security Services were sworn in this spring and began a five-month peace officer academy program for training and certification.

That's after New York Gov. Andrew Cuomo signed legislation last December allowing the University to give trained members of its security personnel the authority to make arrests on University property involving



OATH-TAKING: Security officers begin training as peace officers.

a felony, misdemeanor, or breach of peace. Peace officers also will be authorized to make mental

health arrests—an authority that allows officers to intervene promptly in mental health emer-

gencies. The officers will not carry firearms or tasers.

In December 2010, President Joel Seligman directed the formation of a security commission, which found that while there had not been a significant increase in the number or severity of crimes on campus, there had been an increase in the number of calls for security personnel in which there had been a potential for confrontation. It's expected that by this fall, security will have its first mixed force of sworn peace officers and regular security officers.

HIGHLIGHTS

Softball Records First Solo No-hitter

The Yellowjackets' spring seasons get under way.

BRITTANY GRAGE '15 THREW THE FIRST SOLO no-hitter in Yellowjacket softball history as she and her teammates defeated RIT 8-0 in the Liberty League season opener in April. The sophomore from Pittsford, N.Y., also drove in seven runs in the doubleheader sweep of the Tigers.

The quick start to the Liberty League schedule helped put Rochester one game up on Union and RPI by the middle of April. Also leading the Yellowjackets was Nina Korn '14, whose batting average rose above .300, and whose 15 RBIs were second only to Grage (22) (both have four home runs). Tayler Fravel '14 was hitting .291 with Meg Hennessy '14 at .275.

Softball was part of a full slate of sports getting under way this spring:

Baseball: Rochester won three of four from Skidmore College, two on shutouts, to improve to 6-8 in the Liberty



TITLIST: Nick Palladino '14 won the UAA individual title for the third straight year.

League, 10-14 overall. Josh Ludwig '15, Jake Meyerson '16, and Sam Slutsky '15 were leading the offense with Ludwig hitting .341, Meyerson .333, and Slutsky .326. Rochester had 44 stolen bases in 24 games. Ludwig led with 13, Ethan Sander '15 had 10, and Slutsky had nine. On the mound, Jon Menke was 2-2, Corey King 3-3. Adam Sullivan pitched six innings of a shutout over Skidmore to get his second win of the year. The first came against Emory.

Golf: Nick Palladino '14 won the UAA individual title for the third straight year and Rochester claimed the team championship. Dominic Schumacher '16 was the UAA Rookie of the Year. He tied Palladino for medalist honors with Palladino winning a playoff for the individual award.



ALL-AMERICAN: Ally Zywicki '15 was selected for the honor as a sophomore.



RELAY RACERS: Teammates Claire Crowther '13 (front) and Cameron Edwards '16.

Rochester was one of several teams receiving votes in the Division III golf poll.

Lacrosse: Rochester was 2-9 by mid-April, 1-4 in the Liberty League. The Yellowjackets defeated Elmira, 10-7, and Bard, 15-7, in a Liberty League game. Lauren Basil '15, Cassie Mahar '16, and Elisabeth Watson '16 led the team in scoring (17 points for Basil and Mahar, 16 for Watson).

Men's tennis: Rochester was 13-7 and ranked No. 17 regionally. The best individual singles record belonged to Matthew Levine '16 (21-6) with Ian Baranowski '16 at 14-5. The doubles teams of Boris Borovcanin '14 and Julian Danko '15 (18-5), Baranowski and Joel Allen '13 (16-3), and Levine and Ben Shapiro '16 (15-7) were off to standout seasons as well.

Women's tennis: Led by Frances Tseng '13, who was ranked 20th in Division III, the women's tennis team was ranked 12th regionally in mid-spring. Tseng and Cara Genbauffe '15 were ranked 11th as a doubles pairing. Tseng was 15-4 in singles play. Janice Zhao '13 was 14-6.

Men's track & field: Adam Pacheck '14



FAST PITCH: Brittany Grage '15 threw the first solo no-hitter in Yellowjacket softball history this spring with an 8-0 win over RIT. Overall, the team was leading the Liberty League by one game early in the season.

was invited to compete at the Penn Relays in late April in the 10,000-meter run. He is one of a bevy of qualifiers for the ECAC championships, including both the 4-by-100-meter relay (Gene O'Hanlon '14, Anthony Paschke '14, Max Sims '15, and Jeff Hrebenach '16) and the 4-by-800-meter relay (Yuji Wakimoto '14, Ethan Pacheck '15, Minetsinot Kassu '16, and Jeremy Hassett '16).

Women's track & field: The 4-by-400-meter relay (Becky Galasso '14, Brittany Porter '15, Cameron Edwards '16, and Claire Crowther '13) was ranked 10th in Division III after finishing second at the UR Alumni Invitational. The women produced eight ECAC qualifying performances. Besides the relay, the qualifiers were Victoria Stepanova '15 and Jennifer Klemenz '15 in the 10,000, Meg Ogle '13 in the 3,000-meter steeplechase, Galasso in the 400, and Edwards and Crowther in the 400 hurdles.

Women's rowing: With only one senior, the young team was ranked 18th heading into the spring season. In their first race, the Yellowjackets finished behind No. 9 St. Lawrence and Division II's seventh-ranked Mercyhurst, but ahead of RIT. The Novice 4s defeated Ithaca in week two, and in mid-April, Rochester defeated No. 15 Hamilton in the First Varsity Eight race.

In highlights from the winter seasons:

Squash: The Yellowjackets finished fifth in the nation and produced four All-Americans, the most ever in a single season—Andres Duany '13 and Faraz Khan '16 on the first team, Neil Cordell '16 and Adam Perkiomaki '13 on the second team.

Swimming & diving: The women finished fifth at UAAs and the men finished sixth. Divers Sara Spielman '13 and Elliott Lasher '13 competed at the NCAA regional championships at Ithaca.

Indoor track & field: Claire Crowther '13 won the ECAC 500-meter run and broke a school record in the process. Rochester finished 13th out of 50 schools. For the men, Adam Pacheck '14 had the highest individual finish. He was third in the 5,000. The Yellowjackets finished 10th.

Women's basketball: Reaching the second round of the NCAA playoffs, the team finished 20-7 overall, second in the UAA (11-3). Ally Zywicki '15 was named an All-American by the WBCA.

Men's basketball: The team shared the UAA title (10-4) and reached the second round of the NCAAs before finishing at 22-5. John DiBartolomeo '13 was a consensus first team All-American, as chosen by four organizations. **R**



BASKET OF HONORS: Senior basketball guard John DiBartolomeo was named national Player of the Year by two media outlets and an All-American by four organizations.

ALL-AMERICANS

Yellowjackets Rake in Honors

John DiBartolomeo finished his Yellowjacket basketball career as one of the program's most decorated players. The senior from Westport, Conn., was named national Player of the Year by two media organizations that follow Division III basketball—D3hoops.com and *DIII*News.

Both groups also selected him as a first team All-American, giving DiBartolomeo four first-team selections for the year. Also naming him an All-American were the National Association of Basketball Coaches (NABC) and the U.S. Basketball Writers' Association. DiBartolomeo, who led the 22-5 Yellowjackets in scoring, rebounding, assists, and steals this season, also was named Player of the Year by the University Athletic Association and the Eastern College Athletic Conference (for Upstate New York). He was named the East Region Player of the Year by D3hoops.com and the NABC. DiBartolomeo was a first team honoree by the UAA, ECAC Upstate New York, the NABC, and D3hoops.com.

He was selected to play in the Reese's NABC Division III All-Star Game, and he was named a finalist for the Josten's Trophy, given by the Salem Rotary Club.

DiBartolomeo was one of two Rochester basketball players to earn All-America honors this spring. Sophomore guard Ally Zywicki, of Liverpool, N.Y., was selected as an honorable mention All-American by the Women's Basketball Coaches Association. Zywicki, who led the 20-7 Yellowjackets in scoring, was named first team All-UAA, second team All-ECAC Upstate New York, and first team All-East Region by D3hoops.com.