

FACULTY PROFILE OF RICHARD S. ELLIS: HEALING THE STRESS OF ACADEMIC LIFE AND FINDING PEACE

by Michael Lavine

This year's newsletter introduces a new feature: faculty and staff profiles. We begin with a profile of long-time faculty member, Richard S. Ellis, describing his academic history and how his academic and non-academic lives intertwine. This profile stems from conversations between Richard and Michael Lavine, the Department Head.

We'd like to hear from you. Tell us whether you like the feature and want to see more faculty and staff profiles in future issues of the newsletter. Suggest a favorite professor or staff member whom you'd like to see profiled.

This is the story of my colleague, Richard S. Ellis, whose successful career was nearly destroyed by incapacitating headaches. Paradoxically, because meditation taught Richard to accept the pain, the headaches have given new meaning to his career by revealing both the causes of suffering in academic life and a way to heal that suffering. Meditation has also given Richard another gift, an appreciation of the deep spirituality of mathematics.

The story starts normally. Richard joined the Department of Mathematics and Statistics in 1975, three years after receiving his Ph.D. His life was filled with blessings: above all, Alison, his wife, best friend, and wise teacher; two children, Melissa and Michael, who are now grown and have children of their own; talented colleagues and students; international travel; and success in research, which led to early tenure in 1977, grants from the National Science Foundation, a Sloan Foundation Fellowship in 1978, and early promotion to full professor in 1981.

Richard's research is in probability theory and applications to physics. In the late 1970s he focused on an exciting, new research area being developed at New York University, where he had earned his Ph.D. It was the theory of large deviations, which studies events of small probability and major impact; for example, being dealt a royal, straight flush in a high-stakes poker game.

More broadly, a large deviation is any event defying expectations: a surprise, a disaster, a miracle. The theory of large deviations is appropriate for Richard because, as he would eventually realize, his life has been a large deviation. By chance, while attending Alison's sweet sixteen party, he saw her smile and immediately fell in love with her. After graduating from Harvard in 1969, Richard was planning to study graduate math at Princeton. The Vietnam War intervened, forcing him to take a draft-deferred job at Bell Labs, which by chance sent him to NYU to study math, where

by chance he met Henry McKean, who as Richard's thesis advisor taught him how to do research and in the process became his hero and role model.

In 1981 there occurred a large deviation of tremendous force, the repercussions of which Richard feels to the present day. Completely by chance, Alison and Richard had a casual conversation with a friend about Israel, where her daughter was living. As a result of this random encounter, Alison, Richard, and their two children spent the first six months of 1982 in Israel although they knew no one there. Richard received a fellowship that supported him as a visiting professor at the Technion – Israel Institute of Technology in Haifa. That visit changed his life because it invited him to explore his Jewish heritage, which he had largely neglected since his bar mitzvah. Doing so would open him up to the spirituality of Judaism and the wisdom of Buddhist teachings and would enable him eventually to teach the Hebrew Bible.

Israel was also the place where in 1982 he started to write his first math book, *Entropy, Large Deviations, and Statistical Mechanics*. Published three years later by Springer, the book highlights a useful theorem, which, to his total surprise, came to be called the Gärtner-Ellis Theorem. Jürgen Gärtner is a German mathematician whose work Richard had generalized. In 2006 the book was republished by Springer in their *Classics in Mathematics* series. In 1986 and again in 1989 Richard and his family returned to Israel for extended visits.

Back home in Amherst and inspired by his experiences in Israel, Richard worked to improve his Hebrew, studied the Hebrew Bible, became active in Jewish affairs at UMass Amherst, and taught the Hebrew Bible at his synagogue. These activities led to his appointment in 1998 as an adjunct professor in the Department of Judaic and Near Eastern Studies, where he taught courses on the Hebrew Bible and the writings of Franz Kafka. During the previous year Richard's second book on the theory of large deviations, co-written with Paul Dupuis, was published by Wiley. Richard also published articles on the Bible, literature, and Jewish-Christian relations and had other professional achievements. He was elected to fellowship in the Institute of Mathematical Statistics and received an outstanding faculty award for research.

As the year 2000 dawned, Richard's career was moving along in high gear. Then disaster struck, which forced him to see his achievements in a new light. Here is how he described it to me.



Photo by Lisa M. Korpiewski

“In February 2000 my career was nearly destroyed by incapacitating headaches. The pills prescribed by the many doctors I consulted changed my personality and drained all my intellectual and emotional energy. I suffered from the pain and even more from my outrage over the pain, which I reacted to with anger, fear, and self-pity, all of which made my pain and suffering much worse.”

After two and half years of suffering, Richard was fortunate to meet a therapist who guided him in meditation and urged him to participate in a meditation retreat during the summer of 2003. At that retreat he experienced the truth about the headaches and the suffering they had caused. Richard explained it as follows. “The truth is so simple, yet so deep: it is not the pain that causes suffering, but the mental state associated with the pain. Through meditation I learned not to push the headaches away, or to react to them with anger and fear, but rather to accept them.” Accepting the headaches allowed them to become his best teacher, “a wise guide,” Richard calls them, “who continues to reveal new insights about life and pain and suffering and letting go and love.”

Richard soon realized that what meditation has done for him, it can do for anyone regardless of their circumstances. As he expressed it to me, “whether you are an academic, a parent, or a businessperson, whether you suffer from physical pain, emotional pain, or the challenges of being human, meditation can change your life as it has changed mine.”

I asked Richard to describe the meditation that he does. “I do insight meditation, which is easily explained. Shut your eyes, focus on the breath, and then expand your awareness to open up to sounds, to bodily sensations, including discomfort and pain, and to mental phenomena, including thoughts and emotions.” “And what is its purpose?” I asked. “The purpose of insight meditation is to cultivate mindfulness. This is the calm and direct awareness of what is happening in the present moment, in your body, in your mind, and in the world around you. By focusing your attention on the present moment, insight meditation cultivates wakefulness and wisdom.”

We now return to Richard’s career because his experience with headaches has given him deep insight into the life of an academic as he has lived and seen it. “It is a life of potentially great fulfillment as a teacher and a researcher,” he said. “However, the reality is often different from the potential because of the frequent deadlines, the never ending pressures, the competition, and the ongoing necessity to prove oneself.” As Department Head, I have become more and more aware of these pressures, both on myself and on the faculty and staff. So I asked Richard to say more about them. “Pressures are everywhere. It’s a culture of pressure: publishing papers, applying for research grants, teaching, doing committee work, attending conferences, answering email. The wheel never stops turning. Tenure and promotion are major achievements, but because the standards are so high, earning them is often fraught with anxiety and fear.”

Richard has done well in his career, and I wondered how he has dealt with these pressures. “Many of us, including me before the

headaches started, have dealt with pressure unskillfully, by stress and overwork. Stress causes suffering, and in my case it contributed to the headaches. The headaches have now become my best teacher, and they’ve taught me to slow down. However, I expect that most of our colleagues are very busy and don’t have the time to explore the stress, fear, anxiety, and competition that are part of academic culture. Nor is stress a favorite topic of conversation. But as I learned with the headaches, pushing away the problem makes it only worse. When I look at my young colleagues, I ponder the big question. How does one find the time and energy for what matters most: family and children?”

I asked Richard if there is another way. He smiled. “I only wish I knew this before I got the headaches. When I was in New York City a few weeks ago, I had the image of our academic culture as a New York City of frenetic activity. How does one find peace and happiness? Meditation is an answer, perhaps the only answer because it changes you. In the center of this New York City of frenetic activity there is a huge, quiet space, a Central Park of peace and equanimity, which you can discover by becoming quiet yourself. It is a space offering wisdom, not knowledge, offering mindfulness and insight, not success or fame. Shut your eyes. Become aware of your breath. Stop achieving. Stop thinking. Stop doing. Slow down. Relax. Breathe. Be.”

Meditation has also given Richard another gift. During periods of his career, Richard has viewed mathematics as too narrow, too focused, and too technical. No longer. Meditation has also allowed Richard to appreciate the deep spirituality of mathematics. This is the gift of seeing a problem and its solution clearly, which it shares with meditation.

If readers would like to try meditation, Richard recommends that they join a class or participate in a retreat at a nearby meditation center. People can find numerous resources on the internet and can consult many books on the topic, including Richard’s book, *Blinding Pain, Simple Truth: Changing Your Life Through Buddhist Meditation*. I am mentioning his book, not to promote it, but to offer it as a resource for interested readers. Details are available at the book website, RichardSELLis.com.

Richard continues to do research, teach classes, guide a graduate student in her Ph.D. dissertation, do committee work, answer emails, have headaches, participate in his synagogue, listen to jazz, drink strong coffee, and visit his children and grandchildren in New York City with his wife. He also meditates half an hour a day. “Meditating daily for any amount of time,” he said, “can lead to deep, lasting change. Be patient. Stay with meditation, and you will be rewarded. It will calm your mind, help you cope with pain, reduce stress, and heal suffering. It will also create peace within you and allow the innate wisdom planted within you to blossom.” Richard invites readers having questions about meditation to email him at rsellis@math.umass.edu.

During my conversations with Richard, I kept nodding my head, enriched by this wisdom that was born from pain.