

COMING LATE TO AMHERST'S CORE CURRICULUM

I am an experimental researcher. Often I learn how a system works by the “Minus One” principle: observe its behavior when one element is altered. My story emerges from the fact that I entered Amherst in the Sophomore year, after my classmates had completed most of Amherst’s Core Curriculum. Consequently, my connection to the Amherst experience unfolded long after graduation. In the end, I have honored the power of “peer-to-peer” experience in working with faculty colleagues to create the doctoral program in genetics at Wisconsin.

In his role as class correspondent, Hank Gideonse has served to connect me with the activities of Amherst 58. Beyond that, his voice from Maine resonates with my affinity for the Maine seaside – where my family enjoys periodic summer reunions. My profession has brought me into contact with three other Amherst contemporaries: with Dave Suzuki, during the time our research overlapped in experimental genetics; with Dave Mayhew, after we were each elected to the National Academy of Sciences; and finally with Barry Bloom when my research moved toward public health issues surrounding colon cancer. In particular, my current research with colleagues at Wisconsin investigates the detection of early stages in colon cancer, and the effects of vitamin D supplementation on these stages. Though enriched by our shared Amherst history, the substance of these belated encounters has involved the power of a shared experience between peers – by chance long after college days.

Beyond these belated connections, I have enjoyed others with younger Amherst graduates. Here too, the substance comes from addressing a new shared issue, not from a challenge posed to the two of us in the Core Curriculum. Briefly, what are these shared issues?

The research of Ted Jones (a postdoctoral fellow with me) and Art Landy (on the faculty at Brown) intersected with my interests in the regulation of gene expression and recombination. Richard Braun (on the faculty at Berne Switzerland) shared an interest in cell replication. Gerry Fink (on the faculty at MIT) has had a leadership role in the Genetics Society of America (GSA); I have edited a monthly column for the GSA with my colleague, James Crow to which Gerry has been an important contributor (GENETICS 203: 1011-1022, 2016). Tom Benjamin, Harold Varmus, and Doug Lowy have been actively studying the genetics of cancer, sharing with me the challenges of exploring this human disease with the laboratory mouse. Finally, Mark Reichelderfer (a physician at Wisconsin who shares with me both a suburban Chicago and an Amherst background) is the key link in the research with which I am currently involved: to connect results from animal models for colon cancer with the challenge of detecting the disease early in people. Science evolves, as must scientists.

Most of these interactions have arisen randomly. Their shared Amherst nature has then served as a bond. My connection with Tom Benjamin provides an informative anecdote. One day while on sabbatical at the Pasteur Institute, I

was sitting in the Metro, deep in thought. As I looked up to check the time there was Tom Benjamin (Amherst 1959), whom I had known briefly on the squash court at Amherst and in graduate school at Caltech. While our three children were in French school, my wife Alexandra and I then met up with Tom over lunch. We had a lively discussion of mouse genetics. This chance encounter in the Pasteur Metro followed by a discussion of mouse genetics over lunch epitomizes the pattern by which I come belatedly to the peer-to-peer power of Amherst's education.

I shall end my story by describing an effort that I have engaged with colleagues on the Genetics faculty at Wisconsin. Each year, around 10 doctoral students come to Wisconsin to become professionals in this multi-faceted field. A doctoral research program requires around five years, so that around 50 Genetics doctoral students are on campus at any time. Wisconsin's campus is also multi-faceted: beyond the Department of Genetics and Medical Genetics, there are faculty in 21 other departments who include the science of genetics in their research. Therefore the 50 doctoral students become scattered across a broad array of laboratories!

During the time that I directed this doctoral program (1987-2002), the faculty developed a program that created a community from this diversity. Its Core Curriculum started in the first year with three didactic courses on the central elements of the discipline. It then joined into the campus-wide weekly Genetics Colloquium in a way that enhances the peer-to-peer experience. In the Spring semester of both the first and second years, the doctoral students engage the Colloquium Speaker – first, in advance (by raising questions from reading an article by the Speaker); and after the lecture by discussing in roundtable format the issues raised by the questions posed by students and by the Speaker's lecture. The presence of both first- and second-year students in post-Colloquium roundtable discussions creates an expanded peer-to-peer opportunity to learn from one another. One of my faculty colleagues quips: "On the campus you can tell a doctoral student in the Genetics Program – by the smile on his or her face!"

Our Amherst experience involves more than its Core Curriculum. Indeed, I have been impressed by the fact that two of distinguished scientists with whom I have mentioned connecting later did not major in science at Amherst: Doug Lowy in Art History and Harold Varmus in English. As we 1958 alumni gather, in person or in spirit, we can wonder how our experiences in the Core Curriculum and other facets of our liberal arts education at Amherst translates to ways to meet the challenges of today's society – local, national, and global. My lifelong response to coming late to Amherst's Core Curriculum is reflected in a simple phrase –

JUST CONNECT!

To Amherst 1958 and our faculty, with thanks for our shared experiences and the loyalty they have generated,

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