Life is a Module
Paul Fisher addresses the class of 2011

Summer at Stanford had finally arrived on June 12th, 2011, as Dr. Paul Fisher, Beirne Family Professor of Pediatric Neuro-Oncology, took to the podium to address the class of 2011. A perfect breeze drifted through the main quad, ruffling the gowns of the graduates who looked toward their futures, some fearful, many excited and all of them awaiting inspiration. They were not to be disappointed. “I didn’t want it to be that same old grad speech,” said Dr. Fisher during a recent interview, “you know: live long, prosper… I realized that I had a great chance here — one final teaching moment.”

Dr. Fisher, who heads up the largest pediatric brain tumor program in the Western United States here at Stanford, also teaches Hum Bio 154 Cancer Epidemiology every Winter Quarter. After graduating from Hum Bio in 1984 and then serving as Head B-Side TA for the

Graduation photos courtesy of Carlos Seligo  continued on page 2
Paul Fisher, cont’d

Core in 1984/85, he was keenly aware of what the graduates were going through. He began with some disclosures: “As an undergraduate, I received a C in Chemistry 35 with Wray Huestis, but I remain on the payroll of Stanford University. In Dr. Porzig’s Vertebrate Biology lab, it was my lab partner, not me who chopped off that cadaver cat’s tail, and while head TA I was stopped by the Stanford Police for driving my car in the Quad and White Plaza. But I believe I have no criminal record…’” The laughter from the audience of graduating Seniors rang loud with their relief. “Talented, hard-working, normal” are the three adjectives Dr. Fisher describes when he talks about the Hum Bio students. He stresses the last of these as he talks about his past and present advisees using phases like “superstars” and “great students.” It is clear now, why he deserves the title: Lifelong Human Biologist.

“All of you, you are more talented than you realize,” he tells the rows of upturned faces and shining eyes, “You will be fine.”

And then, he says it: the mantra, the crux of this entire graduation address, “Repeat after me: I am a Human Biologist. Life is a Module.” He clarifies for the parents in the crowd, “modules are when several disciplines converge to tackle an issue from a bigger picture perspective. Any Human Biology graduate can tell you, not only the physiology, but also the impact of culture and society on the lactase gene and Vitamin D metabolism. Allow me to give you some examples…” and with this, Dr. Fisher begins to describe how this mantra applies to his work as a pediatric cancer specialist, “As a physician,” he tells me during our interview, “I take the module approach to patient care. We have regular meetings with Child Life Specialists, social workers, psychologists and teachers. You learn a lot and that, ultimately improves the care the patient gets.”

“But how do you do it all?” I ask him, “with 500 active patients at any given time, a teaching schedule, advisees, a wife (also known as ‘backward roller skater lady’ in the Quad and White Plaza) and three children of your own?” In all of these endeavors, Dr. Fisher takes a team approach, “It’s important to have great teams that you can rely on. As a father, I give myself a B+. I’ve been there for all of the big events, but there have been some long hours in between.” This is what the students love so much about Dr. Fisher: He’s not afraid to admit the challenges. And this gives them hope. It’s not about daily perfection. It’s about taking a bigger perspective and staying real.

For Dr. Fisher, this has meant knowing his patients and their families, including the first names of the parents, what they do, their daughter’s hobbies or their son’s pets, even their religious or belief systems. It has meant agreeing to take a pie in the face (literally) from an 8 year-old patient who persevered through 6 months of chemotherapy and radiation treatment, only on this condition. It has meant, on occasion, receiving a letter like the one Dr. Fisher received from one of his less fortunate patients. It read: “Dear Dr. Fisher, if you are reading this note, it means that the tumor won, and I am now in Heaven. I think you are a real person. Not all the doctors at Stanford are real.”

Life is a module.

Not only does Dr. Fisher fight to understand his patients’ inner worlds, he also regularly battles with the political and economic forces at play in the American health care system. “Never lose your advocacy,” he tells the students, “Repeat after me: I am a Human Biologist. Life is a Module.”

As the faces in the audience soften into smiles of hope, some eyes still glistening with tears, the graduates are offered a last word of advice, “Graduation from Stanford is an amazing feat and honor; but a lifelong obligation. You have many modules ahead of you. Just as Glinda the Good Witch told Dorothy at the end of her journey on the yellow brick road: You have had the power all along. So, later today, when your parents ask you what you plan to do with this degree in Human Biology, you can reply confidently: I am a Human Biologist. Life is a module.”
It was an afternoon to remember. Just after 2pm, alumni, faculty, staff and the surviving faculty founders of the Program in Human Biology, began arriving on the scene. The marquis had been pitched on the lawns between the Main Quad and the Engineering buildings. Hum Bio staff, Linda Barghi, Lia Cacciari, Robyn Duby and Barb Hunt greeted the early birds with the warmth and charm that have become hallmarks of time spent in Building 20. Behind them, the cake, an impressive three-tiered construction designed by Human Biology students, rose up between stacks of dessert plates on either side. BethAnn Goldberg of Studio Cake in Menlo Park had clearly put her heart and soul into this one, understandably so... As a Stanford Alum who actually completed the Hum Bio Core before graduating with a degree in Engineering, she had experienced firsthand the history that sat upon those three gorgeous tiers, each harboring a different flavor of cake on the inside. And perhaps the decision to make the cake appeal to a variety of tastes was no coincidence! Like the Program in Human Biology itself, there was bound to be something for everyone - a piece that would suit the individual needs of even the pickiest eater. As Carol Boggs, Bing Director of Human Biology, jokingly stated in her gracious thank you speech: “At least we know the cake is structurally sound!” This seems to be a recurring theme and one that lies at the very heart of Hum Bio. The program aims to give students a solid grounding in the disciplines they will need to find solutions to our most pressing contemporary problems. Once their “structural soundness” is established in the Core, they are free to decide in which direction they will travel - be it chocolate, pear or classic vanilla. They are encouraged to pursue their individual passions with unfailing support and respect for their individualized areas of interest. And the proof is in the cake. The students who choose this major are truly remarkable. “To me, Hum Bio has been all about biology in context,” says Liz Smith, one of the contributing cake-designers, “I’ve encountered Bronfenbrenner’s ‘nested individual’ diagram (the individual in the context of increasing subsystems/levels of environment and the interaction between these levels) in pretty much every single Hum Bio class I have taken at Stanford, so I wanted to...
structure the cake around this concept. That’s why the bottom tier was decorated like a globe, the middle was covered with symbols of community and society (people, the environment, etc), and the top tier represented the individual, the small-scale biological components of the human organism.” The creation that resulted was clearly no ordinary cake. To witness this kind of student engagement, is to witness part of what makes Hum Bio so special. We were reminded by Dean Richard Saller, Vernon R. and Lysbeth Warren Anderson Dean of the School of Humanities & Sciences, that the uniqueness of Hum Bio also lies in one of the major goals of the program: to connect students with the frontiers of research in their areas of interest. In this way, we have remained “forward looking.” And securing our future was a major focus of the four keynote speakers: Don Kennedy, Emeritus of Stanford University spoke on Climate Change, Energy Policy, and Political Logjam, bringing our attention to the fact that we have watched the issue of global climate change migrate from the field of environmental policy into the field of health policy as widespread awareness of the health repercussions of our “human footprint” grows; Ashley Boren, Executive Director of Sustainable Conservation delivered Leveraging Partnerships that Promote Sustainability, reminding us that “environmental problems are hard to solve but they are worth the effort” and Deborah Zarin, Director of ClinicalTrials.gov spoke on Clinical Trials & Evidence Based Medicine: What You Don’t Know Might Hurt You, expressing concern about the selective publishing of research findings. Her parting message to her own children as they headed off to pursue their undergraduate degrees at Stanford: “Take Statistics!” Finally, Nathan Wolfe Founding Director, Global Viral Forecasting Initiative delivered: Before it Strikes: Viral Forecasting for Pandemic Prevention. It seems we may have only scratched the surface when it comes to the discovery of microbes, especially given findings that the majority of life exists in the upper crust of the Earth rather than on the surface. Perhaps, suggests Wolfe, we should rephrase the question about life on Mars, asking instead: “Is there life in Mars?” Also, Wolfe cautions, given the ever increasing frequency of intercontinental travel, microbes are far less contained by geography than they were in the past. The result? Wolfe tells us that these days, “what happens in Vegas, doesn’t stay in Vegas,” and we will need reliable viral forecasting nets to prevent potentially disastrous outbreaks. The panel discussion that followed these “microlectures” was moderated by current Hum Bio student, Steven Crane. He asked each of the keynote speakers to describe the most important gift that their involvement with Hum Bio had given them. Kennedy’s answer came last. As he looked out over the alumni whose career paths had been shaped by the program he (and seven other visionary thinkers) had launched 40 years ago, his voice softened: “The best part of my involvement with Hum Bio has been the joy of watching each of you become the truly inspired and committed people you have become.”
Where it all began...
A brief history of Human Biology

Forty years ago, a handful of visionary thinkers launched The Program in Human Biology – now, the most popular undergraduate program at Stanford University. What led them to sense the critical need for interdisciplinary educational programs in preparing students to face the challenges of the modern world? On October 21st, 2011 some of those remarkable educators returned to join current Hum Bio faculty and staff in celebrating a shared accomplishment – 40 years of successful, ground-breaking undergraduate education. And we had the chance to learn more about the origins of the Program in Human Biology.

It was the late 60’s – a time of social and political turbulence. Environmental threats such as pollution and deforestation were gaining visibility. And while unprecedented discoveries had been made in biology and medicine, these great scientific strides were also raising serious ethical, social and political dilemmas. A small group of educators, all leaders in their respective fields, worried that something was missing in the existing academic programs. Because the problems facing society were multi-faceted, wouldn’t potential solutions need to be multi-faceted too? If so, then the problem-solvers of the future would need to be knowledgeable in a variety of disciplines. More importantly, they would need to be able to make the connections between those disciplines. As the Ford Foundation’s Gordon Harrison, said in 1969, “It is a rare sociologist today who has had even one course in biology; it is still rarer for an economist or political scientist. Study of the behavior of people has traditionally been fragmented. Many biologists, meanwhile, have acted as though evolution stopped at the lower primates.” (Stanford Observer, November 1969). And so the founders of the Program in Human Biology, (David Hamburg, Joshua Lederberg, Paul Ehrlich, Colin Pittendrigh, Albert Has-torf, Donald Kennedy, Sanford Dornbusch and Norman Kretchmer) worked together to create an innovative curriculum with two interconnected goals: They wanted to “humanize” biology and they wanted to “biologize” human studies (psychology, sociology, anthropology and politics). As Norman Kretchmer described it, the Program in Human Biology “sought to create a human biologist, a person knowledgeable about man – his function, behavior, and social patterns… Our program concerns man as an organism, his adaptation to other men and to nature, his ability to control and to live with his environment, and the mechanisms by which these factors relate to his biological and social evolution.” (Campus Report, March 18, 1970).
By the Spring of 1971, 240 students had declared Human Biology as their major. Clearly, the program was meeting some critical needs in undergraduate education at Stanford. A succession of outstanding directors worked tirelessly to promote and shape the founders’ dream. They worked together with dynamic faculty from a variety of university departments, supported by a highly competent and dedicated staff. The students who graduated from the program would go on to become medical doctors, social scientists, engineers, biologists, teachers, business people, lawyers and policy makers. In their diverse duties, they would continue to be aware of the complex relationship between biology and social science, between people and their environment. They shared the title of “human biologist” and they understood that real-life challenges had to be approached as a module.

To hear early faculty and administrators share their memories of the program, you can watch them in the linked videos and visit The Program In Human Biology History Book to read a more complete history of the program, where you can trace Human Biology from its earliest beginnings to the latest curricular innovations. To meet the next generation of Human Biologists, watch the student microdocs on the Human Biology website.
Albert Hastorf
(1921-2011)

Albert Hastorf, Professor Emeritus of Psychology and one of the founding faculty of the Program in Human Biology, died on Monday, Sept. 26, 2011 at the age of 90. Hastorf joined Stanford’s faculty in 1961 and spent three decades teaching, conducting research and serving as a top administrator at the university in the roles of vice president, provost and dean of the School of Humanities and Sciences.

Described as “a pioneer in the study of social interaction and social perception,” Hastorf and his wife, Barbara, remained supporters of the Psychology Department and endowed the Hastorf Family Fund and the Albert and Barbara Hastorf Teaching Fund.

Susan Schofield, a former academic secretary at Stanford who conducted a year-long series of interviews with Hastorf in 2008, described him as a “wonderful, generous man, a fabulous raconteur and a devoted citizen of Stanford.” The 150-page collection, entitled Albert H. Hastorf: A Series of Oral History Interviews conducted by Susan W. Schofield was presented to Prof. Hastorf by the Stanford Historical Society a few weeks before his death.

In April 2011, Hastorf gave a talk at the Stanford Historical Society entitled “Psychology at Stanford: A History.” The podcast of this lecture is available on Stanford iTunes.

Hastorf was appointed Benjamin Scott Crocker Professor of Human Biology in 1979. His presence at Hum Bio’s birthday celebration was sorely missed. His legacy of excellence in education and academic inquiry will never be forgotten.

To watch the interview Hastorf gave in anticipation of the 40th Birthday celebration, click here:

Hastorf interview.

IN MEMORIAM

Salinger to teach on climate change

This Spring, the Program in Human Biology welcomes Jim Salinger, a New Zealand-based climate change scientist who was a lead author for the Intergovernmental Panel on Climate Change (IPCC), which was awarded a Nobel Peace Prize in 2007 “for their efforts to build up and disseminate greater knowledge about man-made climate change, and to lay the foundations for the measures that are needed to counteract such change.”

-Nobel Foundation (10/20/08)

In 2006, Salinger was elected to the position of President of the Commission for Agricultural Meteorology at the World Meteorological Organization. This Spring, he joins us to offer Hum Bio 116: Controlling Climate Change in the 21st Century with Michael Mastrandrea, Assistant Consulting Professor at the Woods Institute for the Environment at Stanford University. Mastrandrea worked extensively with the late Steven Schneider, who was Professor of Environmental Biology and Global Change at Stanford, a Co-Director at the Center for Environment Science and Policy of the Freeman Spogli Institute for International Studies and a Senior Fellow in the Stanford Woods Institute for the Environment until his untimely death in 2010. Schneider also served as Coordinating Lead Author in Working Group II of the IPCC Third Assessment Report and previously taught Hum Bio 116 with Mastrandrea. Their recent co-authored book, Climate Change Science and Policy (Island Press, 2011) will be required reading for the new course. Salinger will be the new Lorry I. Lokey Business Wire Visiting Professor in Human Biology. And while one voice will be dearly missed, may the dialogue that is so critical to addressing these pressing environmental issues be resumed.
Russ Fernald elected to American Academy of Arts and Sciences

On October 1st, 2011, Russ Fernald, Benjamin Scott Crocker Professor of Human Biology, was elected as a member of the American Academy of Arts and Sciences. Membership honors the world’s most accomplished leaders from academia, business, public affairs, the humanities and the arts including more than 250 Nobel laureates and more than 60 Pulitzer Prize winners.

The American Academy of Arts and Sciences is one of the nation’s most prestigious honorary societies and a leading center for independent policy research. Since it was founded in 1780, the Academy has elected leading “thinkers and doers” from each generation, including George Washington, Benjamin Franklin, Albert Einstein and Winston Churchill.

This year, Russ Fernald is in fine company. Among other scientists receiving this honor are astronomer Paul Butler, discoverer of over 330 planets; cancer researcher Clara Bloomfield, who proved that adult acute leukemia can be cured and Nobel laureates Ei-Ichi Negish (chemistry) and H. David Politzer (physics).

Also elected to the Academy this year are some equally impressive artists: jazz icon, Dave Brubeck and singer-songwriter, Paul Simon. We are thrilled to congratulate our very own Russ Fernald!

Grace Hunter to serve as White House intern with National Economic Council

As a freshman at Stanford, Grace (Human Biology, class of 2009) was immediately drawn to Human Biology as a way to learn more about the underlying causes of health and disease. She designed a concentration in the Socioeconomics of Health and Health Care, asking questions such as, “How do poverty, gender inequality, racism, and geography affect health and access to health care?” Although Grace knew that she eventually wanted to work to prevent and treat diseases as a doctor, it was as a soccer coach and cooking instructor to children in East Palo Alto that she began to wonder how to make higher-level policy changes to improve health. After all, she couldn’t tell her students to eat more healthily and exercise more frequently if they lacked supermarkets and safe places to play. Grace continued to develop her interests in health policy as a participant in the 2008 Bing Stanford in Washington Program and then back at Stanford, in classes such as “Health Care in America: The Organizations and Institutions that Shape the Health Care System,” taught by Donald Barr, Associate Professor (Teaching) of Pediatrics. After graduation, Grace was honored to stay on and share her love of Health Policy and everything else HumBio with other students, as a “B-Side” HumBio Course Associate. Finally ready to part with Stanford, Grace spent the past year studying for an MSc in Public Health at the London School of Hygiene and Tropical Medicine, and she recently completed her thesis on “Using Telemedicine to Improve Access to Health Care in Rural Wyoming.” Grace is thrilled to have the opportunity to be a White House intern, specifically with the National Economic Council. The National Economic Council was established in 1993 to advise the President on U.S. and global economic policy. The National Economic Council has four principal functions: to coordinate policymaking for domestic and international economic issues, to coordinate economic policy advice for the President, to ensure that policy decisions and programs are consistent with the President’s economic goals, and to monitor implementation of the President’s economic policy agenda.
What a pleasure to be given the task of writing about the Program in Human Biology! In my late twenties, after retiring from a career in professional ballet, Hum Bio offered me a broad platform on which to pursue my academic passions as an undergraduate. Today, a medical degree and three children later, I’ve returned to the place where my own inspiration was born, enjoying every minute of my involvement with the students, faculty and staff of this remarkable program. They are the heart and soul of Human Biology. Their questions, ideas and single-minded pursuit of solutions to humanity’s most pressing problems, give me hope that my children might grow up in a healthier world.

Happy birthday, Hum Bio. May you continue to inspire and empower the true problem-solvers of the future.

Please send comments to:
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