Fresh Perspectives: An Interview with Dean Meng

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9:30 am is an almost ungodly hour for a campus that seems to widely follow the motto “late to bed and late to rise.” However, the office of Xiao-Li Meng, the new Dean of the Graduate School of Arts and Sciences (GSAS), has long been up and running. As I get off the elevator on the third floor of University Hall, his assistant Leslie Kress immediately spots me, and punctual as ever, informs me that I am a few minutes early and proceeds to notify Meng of my arrival. Within minutes I am joined by Jeff Neal, director of Harvard Public Affairs and Communications, and we are greeted by Meng in his office.

Immaculately groomed and suited, Meng warmsely shakes my hand—the very picture of optimistic energy. An Oriental-style silk tie, adorned with the words “Chinese Imperial Railway,” completes his neat ensemble. This piece of cultural heritage leads me to my first question: Did he envision becoming such an integral part of Harvard University arriving as a grad student from China?

“The short answer is no,” Meng begins with a smile. “What was interesting was that I actually thought about another question. If someone told me as a high school student that someday I would get a Ph.D. from Harvard, I wouldn’t know what to think.”

Meng earned his Bachelor of Science in Mathematics in 1982 from Fudan University in Shanghai, China, where he went on to get a graduate degree in mathematical statistics. In 1986, Meng came to Harvard, where he received an M.A. in 1987 and a Ph.D. in 1990, both in Statistics. Thinking back through those years, Meng discussed how he has evolved personally.

“We tend to contrast where you start and the end, but the natural progression is most important,” Meng said. “Some students set out telling themselves that they wanted to do something very big, and only wanted really hard research topics, whereas others I encountered only wanted easy problems and leniency. I believed that being passionate about my research and engaged in the process, without being too goal-oriented, is the core of my learning process.”

After a decade as a professor of statistics at the University of Chicago, Meng first joined the Harvard faculty as a professor in the Department of Statistics in 2001. He went on to become chair of the department in 2004, maintaining the position until he became Dean of the GSAS in 2012.

During his time as chair, Meng has overseen a rise of the statistics department at Harvard, both in numbers and in recognition, and he is well-versed in the department’s lore. Before our meeting, he had sent me a preface to a book he had co-edited on the history of statistics departments, which includes a chapter on the 55 Years of Harvard Statistics, in which he contrasts Harvard’s statistics department with those of several other prestigious institutions.

“Part of the reason the Stat department started here at Harvard was a letter dated from December 14, 1949,” Meng explained. “The writer was Harold A. Freeman, a professor in the Department of Economics at the Massachusetts Institute of Technology (MIT). Freeman had advocated a joint degree in statistics between Harvard and MIT 60 years ago, yet Meng pointed out the irony that MIT doesn’t offer a degree in statistics to this day.

In the US, many major universities initiated a statistics department about 50-60 years ago. By now, the vast majority of universities have an autonomous statistics department, with the notable exceptions of MIT and Princeton. Princeton had a premier department for twenty some years but in the early 1980s, it was closed down, an outcome which Meng attributes in part to a lack of emphasis on teaching undergraduates.

“Princeton had giants there but got shut down,” Meng said. “It’s a great lesson to all of us. They had really influential people but neglected one thing—they didn’t focus on undergraduate education.”

Another issue that universities like Harvard and Princeton deal with routinely is the fine line between theory and application.

“Statistics is ultimately about solving real life problems,” Meng said. “At Harvard, we really strike the right balance, emphasizing great theoretical work as well as how formulas actually work. It is motivated by real application.”

“The real life applications of statistics extend far and wide, not the least of which is the field of biostatistics, which has a great focus on research in clinical trials, especially medical trials. But properly applying statistical theory is easier said than done.”

“Everything gets digitized.” Meng says. “What do they mean? How do I analyze patterns out of seemingly changing data?” Meng pauses briefly to allow these questions to sink in. “Separating noise from signal is our goal. The only trouble is, what is noise and what is a signal depends on what you’re studying.”

Meng especially credits his colleagues David Harris, a professor in the Department of Biostatistics, for the flourishing quality of undergraduate statistical education at Harvard. Speaking of Blitzstein, Meng highlights Statistics 110, an introductory course to probability that has witnessed a monumental growth in enrollment since Blitzstein first took over as instructor.

“Joe Blitzstein singlehandedly elevated Stat 110 to fame,” Meng said. “It has been great to see the enthusiasm it has generated, and BLISS continue to thrive and expand, providing the many benefits that come with research opportunities. Research in Science and Engineering (PRISE) program. Meng expressed his desire to see programs like PRISE and BLISS continue to thrive and expand, providing the many benefits that come with research opportunities.

“Research requires independent thinking, deep thinking, and creative thinking,” Meng said. “It is inquisitive in this information age: that training and experience in these aspects would not be appreciated by any institutions or employers for which Harvard undergraduates should study in or work for.”

Meng aspires for all Harvard undergraduates and graduate students to become builders and leaders of their fields, rather than merely make a change in a field with deep historical roots and then, a number of years later, work for a company or a university.

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“I want to not only speak about my discipline but also persuade students to go about doing research, how to get into grad school, and professional development,” he said. “The talk,” he concludes with a twinkle in his eye, will only be “half statistics.”

“It means that students are moving on to more advanced courses, moving beyond the Gen Ed level, being both convinced and entertained by statistics,” Meng said. “They now can study and use statistics in a more sophisticated way.”

Extrapolating from the success of EM16, Meng is working on ways to promote similar general education for graduate students, especially those of an international background (nearly 40%) who have yet to be exposed to a liberal arts education in the US.

“Students in the sciences should for example have some understanding of economics perspectives and historical approaches, and humanities students likewise should know something about mathematical logic, design principles, and statistical thinking,” Meng said.

Undergraduate research is one area which Meng considers to be a strength at Harvard, given the high ability of the students. Meng started to work with an undergraduate student during last summer’s Harvard Program for Research in Science and Engineering (PRISE) program. He said that the problem he gave the undergraduate to work on was “one that I did not feel ready to give to any of my Ph.D. students, here or at Chicago.”

“The research progress he has made so far is nothing short of 2-3 chapters of a Ph.D. thesis,” Meng said. “Indeed, his research is pushing me to think harder, not the other way around. And I know he is not alone, having observed that several other undergraduate students have performed in several of my Ph.D. level workshop courses.

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