

Aims of Education XVI 2008-2009
Education: A Personal Perspective
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Foreword by James L. Doti

As we enter any new year, we think about beginnings – and so sharing the text of this fascinating address, delivered at the beginning of this academic year to new students at Chapman, seems particularly appropriate as we enter 2009. Chapman University itself entered a new era in 2007 with the arrival of Nobel laureate Vernon L. Smith and the remarkable team of scholars who teach and research with him at our new Economic Science Institute: Stephen Rassenti, Ph.D.; David Porter, Ph.D., Bart Wilson, Ph.D. and John Dickaut, Ph.D. Their groundbreaking work in the field of experimental economics is defying conventional wisdom and yielding economic insights that will have enormous impact upon the world outside the laboratory and classroom.

Professor Smith himself is hailed as “the father of experimental economics,” and it was for this reason that he was honored with the 2002 Nobel Prize in Economics. What does it mean to have a Nobel laureate on our faculty? It means that Chapman now, more than ever before, is attracting national and international attention – suddenly, I’m finding that people worldwide know about us. But even more important, it means that our students – both graduate and undergraduate – have the opportunity to study and to work alongside one of the greatest pioneers in a vibrant and burgeoning field that didn’t even exist until he created it.

Professor Smith’s lecture to our newest students is not about experimental economics, though, but about his experience as a young scholar just beginning his epic educational journey. His newly released memoir (which I highly recommend), *Discovery*, is full of the same sense of wide-eyed wonder and curiosity about the world and everything in it. I know that the new students who heard this address carried away that same excitement and hunger for knowledge as they embarked upon their Chapman adventure. I hope that it has the same effect upon you.

-James L. Doti

Education: A Personal Perspective

I am not going to speak today about education as a professional discipline, a topic on which I have no special qualifications. Rather I want to talk from my personal experience, first as a student, and ultimately as a professor, in public and private institutions of learning.

That experience had its institutional beginning in 1932. I have written about it in my memoir, *Discovery*, but on this occasion I want to extend and rethink my earlier discussion of the subject.

Eager to learn in the first grade, I would not be disappointed. I was a pupil in a historic one-room rural schoolhouse in Southern Central Kansas. My teacher, Mr. Hemberger, was a local farmer, part of a German immigrant community. He could speak, read and write English and he knew ‘rithmetic, as it was pronounced in those parts. Academically, those skills fully qualified him to teach all the elementary

grades, although my mother, who was something of a language maven, was much irritated by his use of the word *ain't*, an entirely grammatical contradiction of which there are many in the English language (Pinker, 1995, p.375). More important, Mr. Hemberger knew his constituents and their backgrounds. He made it his business to learn their thoughts and aspirations.

The first row in his classroom constituted our first grade; the second lines of seats on my right completed the second grade, and so on to the north wall where, in that small and intimate house, our daily world ended. When instruction passed from my row to the next row, and to the next, my comprehension diminished, straining my curiosity to learn what lay in the future to know. It seemed my birthright to learn some of that future in advance. This seamless institutional connection to expanding knowledge was the pedagogical mark of the rural elementary school house. You were able to see, hear and experience how subsequent learning depended on your current lessons.

At the end of the first grade Mr. Hemberger gave me a note written in longhand to take home to my mother. Bereft of all pomp and circumstance, it read, "Dear Mrs. Smith: Vernon can read the second-grade reader and therefore next year he will move to the third grade."

It would be much later that I would come to understand that out of frugal necessity these Kansas farms had long been brewing a home-grown progressive education system. Nowhere in these rural communities of economic hardship were to be found the resources to build and operate schoolrooms separating pupils by age and grade. Pupils advanced not by the results of test instruments imported from beyond our schoolroom walls, but by the judgment of our teacher, who was intimately familiar with the comparative learning state of his pupils down and across the rows that he nurtured and tended daily.

Only Mr. Hemberger was in charge, and none but his judgment could measure individual progress. The critical skill in this judgment was reading, since that was considered the necessary precondition for all other skill development. Moreover, in that learning environment, if you lagged in some other skill you could always participate along with those in the row on your left as needed. Minimal mastery learning was the criterion for advancement. Students moved to the next grade when they were ready. Well before Mr. Hemberger wrote his note to my mother, he already had me participating in the second row recitation exercises.

Looking back from the perspective of public education today, I have often wondered what Mr. Hemberger would think of the idea that he was working for the government and not his neighbors, and that learned university economists would one day say that he was producing a public good – a slippery theoretical concept – in the technical sense that each derived benefit from a common indivisible experience.

The fact that I excelled in reading, and my teacher thought I could advance to the third grade the following year should not be interpreted as a particularly special event, reserved for rare genius. *This is how the system worked and how it was intended to work.* Sending farm children to school was costly to their families: by that I mean it was "opportunity costly." This is economic jargon: the "Opportunity cost" of taking any action is the value that you have to forego, or give up, by deciding in favor of that action rather than another. Children had chores without end on the

farm, and were obligated to do them because “child labor” was part of family survival, but also integral to their training in social responsibility. If the children were in school they could not do chores, and to that extent school was opportunity costly. Hence, the school system was expected to move the child through at a pace that would instill an adequate working mastery of the lessons, and enable the child to return to farm work as soon as practicable. But, as you guess, out of those local justifications were created capacities for the pursuit of knowledge beyond any narrow initiating vision.

Moreover, the standard reading text came in the form of McGuffey’s Readers. These marvelous readers were designed to advance pupils at their own pace. Thus, quoting from *McGuffey’s Eclectic Primer*, revised education:

“...the greatest possible care has been taken to insure a graduation suited to the youngest children. Only about six new words are to be mastered in each lesson. These new words and the new elementary sounds are always to be found in the vocabulary of the lesson in which they are first used.” (Preface, p. (iii)).

Continuing, in *McGuffey’s Second Eclectic Reader*, it is noted that the plan of this Reader is a continuation and extension of that pursued in the First Reader.

“If the pupil is not familiar with the diacritical marks, he should be carefully drilled, as suggested on page 7, until the marked letter instantly suggests the correct sound. He is then prepared to study his reading lessons without any assistance from the teacher.” (Preface, p. (iii)).

After an oral recitation period with the pupils in your row, this model is what allowed Mr. Hemberger to move to the next row, permitted the student to learn from the interchange on the adjacent row, and for Mr. Hemberger to gauge the achievement of pupils within and across rows.

Allow me to say a little more about *McGuffey’s Eclectic Primer*; yes, it was eclectic, but firmly grounded in the common experience of the pupils. The first lesson introduces the nouns “cat” and “rat.” Every farm in that bygone age of diversified agriculture had a hog pen with lots of rats, and therefore you needed cats. We had two cats that were fully employed, whatever might have been the census count of rats.

Other farm animals were introduced in later lessons using the colloquial language of the time: Thus in Lesson IX, horses were “nags” and in Lesson XII chickens were “hens.” There is also a place for nature, “frogs on logs,” and opportunities for the expression of proper behavior toward nature as well as others, “Tom will not rob a bird’s nest. He is too kind to do so.”

This was an age when separation of church and state did not mean that all discussion and references to religious beliefs were prohibited in the classroom. Near the end of the Reader, the word “God” is introduced in Lesson LI, and in the last, Lesson LII, we have the new word “Lord.” How is “God” introduced? Let me quote:

“Do you see that tall tree?

Long ago it sprang up from a small nut.
Do you know who made it do so?
“It was God, my child. God made the world and all things init.
He made the sun to light the day, and the moon to shine at night.
“God shows that he loves us by all that he has done for us. Should
we not then love him?”
(*McGuffey’s Eclectic Primer*, pp 59-60).

Welcome to the public school of that era.

I grew up in a family of religious skeptics, but my family was not one in which it was thought proper to impose that skepticism on others at the expense of traditions whose morality we shared. Of the many varieties of skepticism, my parents were not among those who felt personally affronted in any way by McGuffey’s expressions of religious sentiment in the classroom. I was not to be protected from exposure to the world as it existed. In this was I was learning something enduring about tolerance, and openness as a part of a process of finding truth and developing your intellectual and emotional identity.

As I have come to see in retrospect, implicit in my family’s system of belief, call it faith, was the naïve expectation that science learning would eventually displace all sources of knowledge rooted in religion. But science is about how natural physical and biological systems function, given their existence, not about purpose and why there is something we call existence. These latter questions are beyond space and time, and are not subject to the hypothesis-testing framework of science.

Of course one is free to deliberately ignore these ultimate questions, so that they are out of mind, but there is an ancient human experience of awe and mystery that deserves to be considered part of our data bank. That sense of mystery is prominent in religious traditions older than writing, and many choose not to ignore it while pursuing knowledge in the strict scientific sense.

Returning to McGuffey’s world, the final Lesson LII in the *Primer* expressed a sense of this mystery, but also the important message of a personal friendly universe:

“When the stars, at set of sun,
Watch you from on high;
When the light of morn has come,
Think the Lord is nigh.”

The prayer my mother had taught me at least two years before I would have read McGuffey’s *Primer* was of unknown secular origin, but conveyed a parallel sentiment:

“The sun has gone down,
The friendly dark has come,
And it is time to sleep.
Let me think over all I have done;

Good deeds to do again,
Bad deeds to forgo and forget.
Now I shall sleep,
Grow while I sleep,
And tomorrow I shall be happy.”

From science we can derive neither the principle that the universe is friendly nor that it is hostile. We may experience it subjectively as both, but the *Primer* sought to instill a capacity to overcome fear by an optimistic focus on the friendly.

That the external world could be unfriendly was made plain by Kansas tornados, and again when the mortgage bank foreclosed on our farm – a risk that is alive and well today even as I speak. Today, as then, the owner lost his equity and the bank found the asset to be worth less than the mortgage loan.

The foreclosure ended my rural education development, and we moved back to Wichita, where my father was able to return to his job as a machinist. We found ways to survive the loss, as untold numbers did then and will do now.

Those early acquired reading skills not only smoothed my subsequent schooling, but also inspired me to do much reading on my own. In our home in Wichita next to the fireplace mantel were glass-enclosed bookcases containing my father’s set of rust-red Harvard Classics. My father had an eighth-grade education and always needed to work long hours for a living. He aspired to read more; hence his full bookcase. For me, however, these books came to symbolize the immensity of the knowable, and I have kept them all my life. One of the classics, volume 17 – which contains tales by Grimm and Andersen and the Aesop fables – became severely worn and frayed, its binding long ago shredded as a result of my frequent readings.

In those early childhood years I will think of libraries as infinite extensions of my father’s bookcase that surely contain all that is known, and I will aspire to go to college because – I believed – that is where one learns all there is to know. Nothing, I naïvely thought, was unknowable. One had only to seek knowledge. But as I gradually learned the action – all the learning and understanding – occurs in the pursuit of knowledge; the questions multiply faster than the answers – and that is the charm of education as a search process.

Volume 17 of the Harvard Classics became one of my two childhood treasures. The other was *Tal: His Marvelous Adventures with Noom-Zor-Noom* (1929, 1937, and 2001) by Paul Fenimore Cooper, novelist of the American wilderness and devotee of liberty. I will read *Tal* to all my preschool children, and my copy will come to have no binding left to dangle, so thoroughly will it be loved and enjoyed. I conceived the idea of having the book reprinted at my own expense, believing that no one else would have such an interest. I procrastinated and was pleasantly surprised to discover the appearance in 2001 of a third edition inspired by the author’s nephew, with an introduction bearing testimony to the book’s loyal and dedicated readership. I had no idea that I was far from alone in loving that book.

Fantasy is important to the child. Dreams are fashioned of fantasy, and out of dreams come the desire for adventure, the desire to learn, and ultimately the

realization that learning to learn is not only a model for seeking, overcoming, and coming to know, but also, and most important, a model for living.

It seems that this conception of the role of fantasy in the child was unpopular with the constructivist psychologists of the 1950s and 60s, until it was thoughtfully reconsidered in works such as B. Bettlheim, on *The Uses of Enchantment* (1976). It is fortunate that these modern educational fads sometimes tend to be short-lived.

What endured from my early school years are memories of pleasure and excitement in learning, a search and discovery process that was intrinsically rewarding. That process was increasingly compromised by the growing urge for performance testing. By the high school years, "learning" had become important in proportion to scores on achievement tests.

For example, in these tests you read several utterly boring paragraphs of text, and then answered a bunch of questions that measure your comprehension of the text. What I remembered was how little of it was worth remembering. This continued in college, except that now the text was sometimes more memorable. Also the math and physics problems carried some intrinsic joy in the process of discovering solutions.

Graduate school classes, with some significant exceptions, were often a grand continuation of education as memory testing. Only the technical level changed, not the procedures. I am reminded of the joke the 2007 Nobel laureate, Leo Hurwicz, told many years ago. "What is the difference between an undergraduate and a graduate student? In an undergraduate class the professor enters the room and says, 'Good morning.' The class responds by saying 'Good morning.' In a graduate class the professor says 'Good morning,' and the students all write it down."

Over the decades what I came to appreciate was simply that where there is no magic there is little of any learning. That what is important is not what you know, but what you can do with what you know that brings magic to your personal experience of enquiry. What is magical about research is the discovery it engenders. There is that pleasurable rush of feeling when the first results of a new experiment come in and you have started to learn something that *no one else yet knows*.

Then you realize that this is also what meaningful teaching must be about; discovering, along with your students, things that you did not know before; making the unknown known; realizing that most of the action, the excitement, is in the chase, and in the new questions that emerge along with any answers to the original questions. Your learning is revealed in the fact that the new questions could not have been asked before. Libraries (and your computer) may record much of this activity, but most of it we learn from watching and interacting with others and by practicing an art, whether it is literature, economics, anthropology or physics.

All this was captured neatly by Ben Franklin. I want to close with one of his gems:

Tell me and I will forget
Teach me and I will remember
Involve me and I will learn.

Thank you, ladies and gentlemen; and may the discovery of truth be ever your pursuit.

About the Speaker

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Nobel laureate Vernon L. Smith, Ph.D., joined Chapman University in 2007 as a founding member of the university's new Economic Science Institute. He was awarded the Nobel Prize in Economics in 2002 for his groundbreaking work in experimental economics. At Chapman, Professor Smith holds joint appointments with the Argyros School of Business and Economics and the School of Law.

Professor Smith has authored or co-authored more than 250 articles and books on capital theory, finance, natural resource economics and experimental economics. He serves or has served on the board of editors of the *American Economic Review*, *The Cato Journal*, *The Journal of Economic Behavior and Organization*, the *Journal of Risk and Uncertainty*, *Science*, *Economic Theory*, *Economic Design*, *Games and Economic Behavior*, and the *Journal of Economic Methodology*. He is a past president of the Public Choice Society, the Economic Science Association, the Western Economic Association and the Association for Private Enterprise Education. Previous faculty appointments include the University of Arizona, Purdue University, Brown University, the University of Massachusetts, and George Mason University. Professor Smith has been a Ford Foundation Fellow, Fellow of the Center for Advanced Study in the Behavioral Sciences and a Sherman Fairchild Distinguished Scholar at the California Institute of Technology.

In 1991, the Cambridge University Press published Professor Smith's *Papers in Experimental Economics*, and in 2000, *Bargaining and Market Behavior*. Cambridge published his *Rationality in Economics: Constructivist and Ecological Forms* in January 2008. He also released a memoir, *Discovery*, in 2008. He has received an honorary Doctor of Management degree from Purdue University, and is a Fellow of the Econometric Society, the American Association for the Advancement of Science, and the American Academy of Arts and Sciences.

Vernon Smith is a distinguished fellow of the American Economic Association, and Andersen Consulting Professor of the year, and the 1995 Adam Smith Award recipient conferred by the Association for Private Enterprise Education. He was elected to the National Academy of Sciences in 1995, and received CalTech's distinguished alumni award in 1996.

Professor Smith completed his undergraduate degree in electrical engineering at the California Institute of Technology, his master's degree in economics at the University of Kansas, and his Ph.D. in economics at Harvard University.

Visit Dr. Smith's personal website: www.chapman.edu/esi/vsmith