

**Frederick C. Williams (1938 – 2006)**

Dear Rosemary and Charlie, Dear Pat, Fred's siblings, Bob and Tom and Liz, Dear Andrea, and all of Fred's family and friends,

I cannot believe that Fred is dead.

1. Fred arrived at Boston College as a sophomore, and a friendship developed between us that has deepened and broadened through the years – almost 49 years!

Fred was dazzlingly brilliant in mathematics and physics, and he challenged the *ratio studiorum* of Thomistic philosophy in ways that I could barely believe. After all, this was the 1950s and we were from the Catholic working class of Boston. We were trained to serve accordingly, one might say conventionally.

Those were the days we studied epistemology, metaphysics, ethics, and theology – lots of theology; and we dispensed with the likes of Kant with a sort of scholastic ingenuity – some might say innocence or arrogance. From my point of view, Fred was revolutionary – at least rebellious beyond my imagination when dissecting what he called “my” religion.

It was also during this period that I remember discussing the philosophers, Étienne Gilson and Jacques Maritain, with Fred – it all seemed very appropriate at the time.

We took an upper level course in mathematical analysis, which, we both agreed, even recently, was inspirational. The textbook was modern, fancy, and difficult; and we had a demanding, kind professor from Switzerland. We understood, even then, that the book was significant. (We were correct in our assessment.) Fred later used this book as a reference in some of his research papers.

Two or three years ago, Fred called me, and, in an excited way, told me that he had just found a copy of this book in a bookstore and purchased it for me. Not long after, he borrowed it from me to reread some topic. Surely he bought the book for himself, and it is still in his possessions.

By the way, he did an hilarious imitation of our Swiss professor.

Throughout the years, we often exchanged and recommended books and articles with and to each other. The material ranged from the earnest and erudite to the earthy. He also gave me several critical books and many articles. He subscribed to Nature Magazine for years, so I have lots of underscored articles from Nature. A recent book gift was *Spikes*, on computational neuroscience, which was of great interest to both of us. I think he wanted to make sure my education didn't founder too dramatically.

2. After graduating from Boston College, we used to meet during vacations at the old Oxford Grill in Harvard Square to discuss our doctoral programs and women – of which we were such experts.

Fred's research was in nuclear physics. There were his ideas on preequilibrium decay; and his direct calculations of the nuclear state densities of certain Fermion systems. I never

understood it, which is probably best for all of you, since I would undoubtedly love to show-off that knowledge.

In any case, Fred was an exquisite scientist – deep and creative, and a technical powerhouse.

As for women –

It is no surprise that men discuss women at every stage of their lives (the men's) and at all of their perceived levels of womanhood. It suffices to sum-up our extensive dialogue through the years – from Boston College and the Oxford Grill to earlier this month – by saying that Fred was truly an idealist, one might say a *hopeless romantic*.

3. Fred was a thinker. To think non-trivially is highly nontrivial, but Fred could muster an intellectual intensity that I have rarely seen – one might say he gave new meaning to the word “intense”. And you could see Fred, the no-nonsense analyst, in action. I was always simultaneously amused and intimidated watching the half-open hands turning, the mouth taut, the head tilted. What a visual! What results! He was a man of ideas.

4. Cathy and I interleaved our lives with Pat and Fred through those formative years, where we saw Charlie and Rosemary, and our own children, flower. Cathy and I were entrenched in College Park; but we had those wonderful, and now memorable, family dinners and overnights in Pat and Fred's homes through the years: Annapolis and Richmond and Boston and, of course, the house on Strada in Northern Virginia.

We remember very clearly Charlie, as a toddler, playing with pots and pans in our College Park apartment. And, of course, there was Fred the cook, enthusiastic and excellent.

His rendition of linguini with brie, and fresh tomatoes and basil, which he served in later years, was heavenly.

Those dinner parties had a wide range of discussions from “New Yorker repartée” – we were impressionable – to the more sublime issues about raising our children.

I remember our discussions on nuclear arms in the early 1980s. Fred had facts at hand with his published scientific research in nuclear physics, as well as his thoughtful essays on nuclear proliferation that he wrote when he was a fellow at Harvard's Kennedy School. But we all had a lot to say.

Fred worked directly with Paul Warnke. When Warnke died, not so long ago, Fred had strongly positive things to say about the man and his ideas.

And, naturally, there was Vietnam and Nixon. I recall Jonathan Schell's series in the New Yorker, which we all discussed, about 1975, providing an intellectual backdrop on the Nixon years. Of course, we four had strong opinions on the matter. In the very recent past, Fred and I agreed that, for all the anguish those times caused us, the present leadership and lack of strong resistance to its absurdities are a cause of profound concern.

Yes, Fred was very political – although I must say he could charmingly contain himself in public. In recent years, he certainly contributed to candidates of his choice.

Speaking of politics, when Pat and Fred first visited us at our newly purchased house in 1983, Fred commented: a two car garage – not bad for a couple of socialists!

5. We met in Washington with some of our scientific friends in the early 1990s. Fred exclaimed, and there are witnesses!, that the first year of law school was the most exciting year in his life. Pat had heard it earlier. Notwithstanding all of my superlatives about his other qualities, this extraordinary remark does prove that Fred was not perfect.

6. When Charlie and Rosemary were grown, his pride in them was glowing. His apartment, and then his house, was a justly boastful museum of Rosemary's creativity. With Charlie it was a little trickier. For, by that time, Fred had railed against the tenure system for years, allowing, perhaps for the sake of our friendship, that some people deserved tenure – but that those people wouldn't need it anyhow. Charlie must have overheard these opinions, and, like any good son, he rebelled and joined academia – and Fred could not have been prouder, although I don't know that his opinions about tenure were soon to change. Now, of course, Rosemary has also joined the ranks.

7. There were large parts of Fred's life in which I was not involved.

He was a traveler, but the only time I traveled with him was to a NATO mathematics and engineering conference in the 1998 at Il Ciocco. This is a mountain resort in northern Toscana, which, at the time, was probably most famous as a practice site for the Azzuri (who recently have had some success). My PhD students, present and former, who were there, all commented on how great Fred was – he was egalitarian and genuinely *interested* in others, this coupled with the fact that he was incredibly interesting.

Fred was a skier and a sailor, the latter activity first indulged under the auspices of the United States government. He also did rollerblading, and actually injured himself during that maniacal phase. In my experience, when Fred did anything, he did it with the intensity I knew so-well in his intellectual life.

Of course, there were all the business and legal activities of which I knew very little, although he would certainly allude to them.

We did have one entrepreneurial misadventure together. We formed the WEBB Group: W for Williams, E for Evans, B for Balart and myself. We were going to design web-pages for companies. The problem was that no-one we approached had heard of web-sites at that time – 1993 or 1994.

8. Fred was my patent lawyer for something Tony Teolis and I did on auditory modeling. I only mention this because, at some point in the process, he understood the science and mathematics as well as I did. I have heard from other of his clients that this was his *modus operandi*: complete scientific mastery of all his diverse projects.

Several years ago I was asked by a major law firm in town to evaluate a patent in a subject related to an area I knew. They asked my hourly rate, and I gave them a number in which I

was sure I was beating the legal establishment. When Fred found out, he couldn't believe how naïve I was to choose such a small fee. He insisted that I seek his advice in the future.

We certainly discussed patent law. I wish I could remember his quote about what any patent lawyer worth his fee could achieve. But I do know that Fred had morals – boy, did he have morals. We had serious discussions about those who wanted to patent theoretical results, sometimes already published by others in slightly different formats. He definitely had real examples in mind.

9. Fred was practical – a doer; and he was theoretical – but absolutely never giving way to loose thinking.

Fred was on the board of directors of my Norbert Wiener Center. In February, he gave the keynote address at our open house. The topic was intellectual property law. He gave an excellent talk – and I expected nothing less. Fred was also my *eminence gris* at the Norbert Wiener Center; and three weeks ago he was giving me financial advice for the Center. Today, during these very hours, he should have been at our Norbert Wiener Center reception. Alas.

In his last illness, several years ago, I thought Fred would die. For days it seemed that way. And then he got cranky and crusty and curmudgeonly – and he lived. Thank God we've had this extra time. In recent years our lunches, usually in the city, and regular phone conversations were a source of joy and security.

10. Sometime ago Fred wrote a poem which reminds me of the awful timing of his death. He titled the poem, "Afternoon":

My life treads an open savannah  
Verdant with mocking surprise  
Lush with anguish, adventure  
Sere with joy and surcease

The looming dark forest creeps into view  
At the distant horizon  
Blanching the afternoon sun  
Save solitude rich with chagrin

And so Fred is gone in the afternoon of his life. He was deep, broad, and brilliant, with a mind like a steel-trap. He was artistic and scientific. Yes, Fred was this and Fred was that, and all at the highest level from my point of view. But he was so much more to me. He was as close a friend as I've had, besides Cathy, along with all that such friendship entails – the love through the years, and now the painful loss. I suppose that Fred would not say that life is a gift from God, but his life was an overpowering gift to so many of us.

John Benedetto  
July 21, 2006