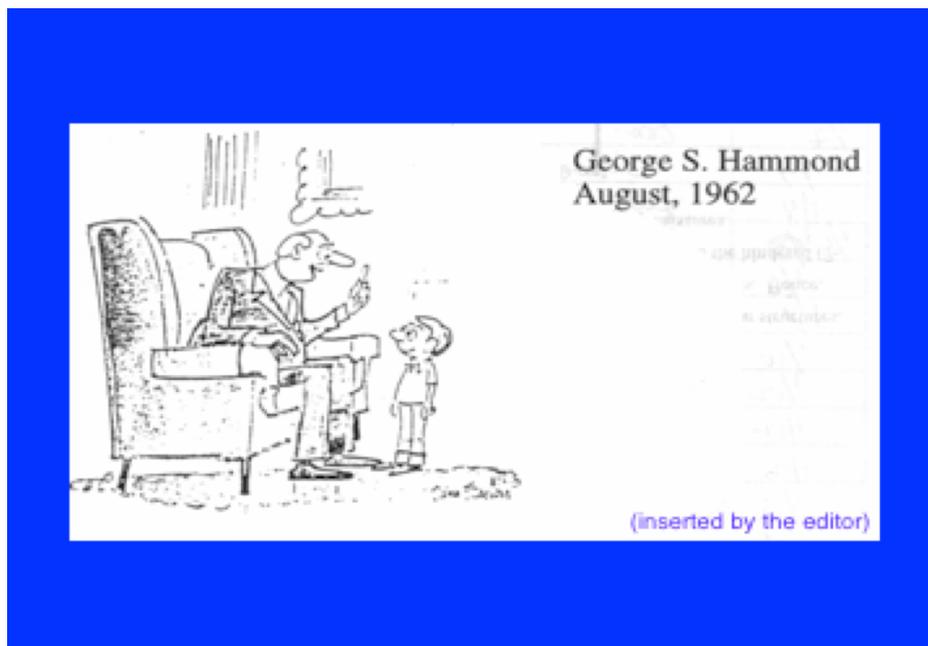


RSH LIU

The Beginning

My professional career started when I joined Caltech in Fall 1961 and became a member of George Hammond's research group. His influence on my professional life has been pervasive. Perhaps the most obvious one is how he affected my way of thinking. Once Donald Cram (my professional uncle) described GSH as one who would rather be original than right. While I cannot say that I am that original, I did try to be different as we tackle various research problems or explaining different concepts in my classes. More than once I reminded my students during our discussion on the Hammond Postulate that he is the grandfather of the tribe.



Philosophy 101. The Way of Life

"The following is for those who think organic chemistry is the hardest course they have ever taken, almost impossible to handle or for those who are doing fine but think some other courses are impossible to handle.

"Do you remember George Hammond? Yes, we came across him last semester when we discussed the Hammond postulate. As you know, he was my professor when I was a graduate student at Caltech; so, he is your grandfather.

"A few years ago, there was a special occasion honoring his 65th birthday. All his former students and colleagues got together for a special symposium in his honor. One of the gifts presented to him was a volume containing letters contributed by his former associates reminiscing their experiences with him further relating his impact on their lives. You see, at that time all his students were already professors at various universities or directors, managers or re-searchers in industry, i.e., having reached a stage in life no longer afraid of admitting short-comings, especially in front of the old professor. So, we all poured our hearts out.

"You also have to realize that at that time a new graduate student had to beg his/her way into a good research group. Imagine when you didn't feel very confident of yourself but yet you have to sell yourself into a research group, some of Nobel Prize caliber. What should you say? Perhaps, 'Please take me into your group. I'll promise to wash your car everyday?'

"Let me read you a few letters from this collection of letters.

"This first one says: 'We all know George's uncanny ability to see the hidden strength of his students or colleagues. (You see we had also reached the stage when we could call him George instead of Professor Hammond). His attitude of not minding the weakness but instead stressing the strength clearly worked out well for all the people associated with him. But in spite of this unique trait of his, I still cannot figure out after all these years as to what he saw in me when I asked to become a member of his research group. I was the fourth one of that year. With three ivy leaguers preceding me, one weakling from Timbuktu (or Howard Payne College) would certainly have been rejected by any other group. But instead I became one of the original Hammond Mafia involved in a very unique period of solution photochemistry.' It went on and signed by oh, it's me.

"The second one is from a professor at Florida State University who was one year ahead of me in Caltech; so, he is your uncle. It says: 'George, the man, the scientist, was bigger than life for me when I was privileged to be in his group and the passing of time only served to make him still bigger. How fortunate I was to have had such a teacher. Always approving, encouraging and expansive. 'Great idea. Sure do it!' That was George to me. And how exciting it was to do research in George's laboratory! In that heady atmosphere we, the students and postdocs, learned to be curious about each others projects, and we learned to be students and teachers for each other. We were truly a research group, not just a group of researchers. Not only did George bring out the best in each of us, he also made us feel we were the best. During one of our weekly group lunches I still remember George's toast: To the best research group in the world. And, if George said it, how could it be otherwise.'

"Isn't that nice?

"The third one is from another uncle of yours, and also one year ahead of me. He is now a famous professor at Columbia University, winning all sorts of awards around the world. In his long letter, he concluded by saying: 'Personally, George has always been my hero. In particular, I have always admired George's scientific integrity and his ability to describe complicated phenomena in terms of simple ideas.' 'I am proud to be part of the first and famous 'Ham-mond

Mafia'. We are a family linked by the spirit of scientific adventure that came from our association with George. I thank him for being the 'wind beneath our wings'!

"You see, now your uncle can fly high as an eagle that he can almost touch the sky!

"A month later Professor Hammond responded, first thanking us for the special occasion. Then he surprised us by sending a copy of a letter he recently sent to his professor. I would like to read part of that letter to you, something written by your grandfather to your great grandfather, the latter now an eighty some retired gentleman in Massachusetts, a real Yoda. He opened the letter by saying: 'Dear Paul: Doug Neckers relayed to me your kind comments concerning the symposium. Although I wish that you could have been there in the flesh, I assure you that you were very much there in spirit. When people speak of 'the chemical family' you will forever be a presence as the real patriarch of the tribe. As I read the letters commenting on my style as a research director I realize anew the profound influence you have had on the way in which I have conducted my professional life.

'When I arrived at Harvard I was incredibly naive and uncomfortably aware of the fact. It was an enormous reassurance to me when you accepted me as a research student. Subsequently I learned things of great value from you: the power of logical reasoning from facts, the delight that can come from creating kinetic models and using them to eliminate or support (but never prove) mechanisms and that science gives one lots of room for friends, but not for enemies.....'

"There, you have just heard how your grandfather described himself: incredibly naive and uncomfortably aware of the fact. (More elegantly said than "I just freaked out, blew it--big time"-as some of you might have put it). All these people felt one time or another totally inadequate but yet subsequently they all did fine in their own ways. So, feeling inadequate is simply the normal process of learning, the way of life. Perhaps the lesson here is that one should never take the attitude: I wish I knew half as much as he did. Well, you may say so, but you should never take it seriously. Imagine after ten generations of half as much, we might all be back in the cave!"

Late nineteen eighties
From the file of "Prof. L Says"