

Dr. Phil Cooperman

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12/3/1918 – 9/1/1983

Removing the last bit of snow from my porch, I wondered about someone from my past. Instead of a sigh, I began a search. I banged my feet against the stairs, stepped into the house, took off my shoes, and ascended upstairs to my nerve center.

I reminisced about my calculus teacher from Fairleigh Dickinson University and sent an inquiry to their math department: what happened to Dr. Cooperman? I expected a few bounces before getting an answer, but not a plea from FDU's Dr. Casti to send

them information! "Any biographical details you could share about Dr. Cooperman would be most welcome...Any information you could relay to us would be terrific, including your memories as one of his students."

In 2014, a scholarship in Dr. Cooperman's name solidified into its present \$500 award. Dr. Casti said, "The Phil Cooperman fund was initially seeded with \$20,000, for which his friend...Gil Steiner contributed about \$2,000. Apparently, 20k was a minimum requirement to set up the fund at the time." Casti acquired a photo from an old yearbook but before he could obtain more, Gil Steiner died in April, 2015. That left him with nothing until my email of March 9th.

My three years from 1969 to 1972 as an undergraduate at Fairleigh Dickinson were filled with fond moments and great stress. My first year was at Rockland Community College, the only school to accept me because of my ruined average at Cardinal Spellman High. I worked hard at RCC and clawed up to a strong grade point average. I had felt that I was on the lowest rung of academia, and needed a curriculum with more heft. FDU accepted me as a sophomore.

Physics was very demanding and required difficult mathematics courses. Add my job at Grand Union, sometimes up to 30 hours a week, and barely kept up. I recall advice from one instructor. "If you find a good calculus teacher—cherish

him." Enter Dr. Cooperman. I stayed with him for three classes.

Dr. Cooperman was a warm, soft spoken, and unpretentious man. He wore glasses with hair that was both thin and fragile which also describes his health. "I must conserve my assets," he frequently repeated, sometimes only to himself. Jack Wilinsky, a physics major behind our class, said, "He was rather ill. He would only buy Checker cars because it was easy for him to get into and out of them. Checker was a brand of cars, famous for the Checker taxis, that went out of business. I still have one of the books Dr. Cooperman gave me. He retired when I was still there."

Philip Cooperman was born in 1918 to Russian immigrants: Harry (6/16/1894 – 8/1/1970) and Dora (4/15/1896 – 2/1/1975) Cooperman. From census data, Philip was born and raised in the Bronx where the family lived. In 1940, they were living between 178th and 179th St. near Vyse Avenue, which was about a mile from where I would be born in 1950. They had three boys and a girl; Philip was the oldest. Dr. Cooperman's father died in Miami Beach, Florida and his mother in Rego Park in Queens, New York. Dr. Cooperman died in Teaneck, New Jersey. His brothers Emanuel and Abraham both died in 2007 at the ages of 78 and 84, respectively. They were followed by his sister Eleanore in 2009 at the age of 86.

I found calculus articles that Dr. Cooperman published in 1952, '53, and '54. He also

attended annual meetings of the American Mathematical Society held at Columbia University. He had an interest in the Atmospheric Environment, and published articles on electrostatic precipitators in journals labeled with both 1967 and 1982, the latest I could find of his work. He was more than an unforgettable instructor, but active in his profession.

I never saw him angry or frown. He seemed content with his job and life. He was a calm, honest, and deliberate instructor with clear and logical lectures. He had an excellent sense of humor—with

a delightful quirk. When he gave his punch line, his head nodded upwards in sync with a smirk. This put me on alert. Was it a joke or was it ironic truth?

His courses weren't easy for me. Far from it, but it was the material, not the man. I recall one unit that was overwhelming. He gave our class hints for studying for the midterm saying, "I want to see if you're reading the book." The exercises we did for homework were important but even with my best efforts, I was unable to understand the end of chapter problems. I gave up and focused on the solved examples in the chapter.

He handed out the exam. What the...!! It only contained examples from the book! I got an 82% on the test. The next highest score was 34%. The

curve was kind to me that day. We had a saying in the Bronx. "The dumbest farmers grow the biggest potatoes." That was me.

Dr. Cooperman welcomed conversation after class and I enjoyed walking with him from Becton Hall to another building or his car. A principal discussions was photography. It was a minor hobby for me. For Dr. Cooperman, it was a passion. He had a wealth of knowledge of the subject. He asked to see my camera and

wife stumbled just as an express train went by. The husband immediately lifted his camera and took the picture as she fell. Then he tried to help his wife. He was a real photographer." <pause> "But it was too late for his wife." <nod, smirk>

At nineteen, I believed everything my teachers told me, but wasn't sure someone could really be that much of a shutterbug or if it was another Cooperman parable. I never rose to his level of photography, but

I always keep my camera wherever I go, even when I go out with my girlfriend. She's safe; Arizona has no subways.

Whether in class or outside, Dr. Cooperman

walked with deliberation and aged slowness, carrying a thin brown briefcase, thus conserving his assets. He accepted his current stage in life. I wonder what was the hindrance when he was only in his fifties.

Whatever diverse topic he spoke of, he was very knowledgeable and thoughtful and many times had a memorable story to go with it. During one lesson, he stressed the importance of thinking through a problem. He then sat down and told a remarkable story. In his unhurried delivery, Dr. Cooperman said, "When I was going for my master's in mathematics, there were three parts to the test. The first part was a written test of mathematics. Ninety percent

You had to *think* like
a mathematician.

next class I carried it with me. Afterwards, I handed it to him. He was familiar with my Kodak Retina IIIC and praised its excellent optics. In the inspection, he noted the smoothness of the shutter and rewind mechanism. He gave it back and summarized. "It's a fine camera."

I could kick myself now because, with Kodak in hand and Dr. Cooperman speaking, I never took his picture. Wisdom was far into my future. He recognized that I was a dabbler because he told me a story before leaving for home.

"There was a reporter who was also a serious photographer. He carried his camera everywhere. One day, he and his wife went out and took the subway. On the platform, his

of us passed and we went on to the next phase. Each of us was brought separately into a room with only a stove and a table. There was a teapot on the stove. I was given the instruction, 'Get the teapot onto the table.' I took the teapot from the stove and put it on the table. That was correct; eighty percent of us passed." He smiled and paused as we sat in confusion. How could math 20% of math majors get that wrong?

"For the final part we were taken again into the room with the same setup. The teapot was once again on the stove. This time the instruction was, 'Get the teapot onto the floor.' Eighty percent of the remaining students failed. They put the teapot on the floor." Dr. Cooperman waited.

In unison, we asked, "What's wrong with that?!"

"The correct answer is to first put the teapot on the table, thus reducing the problem to

one whose solution is already known." <smile> "You already know it's correct to put the teapot on the table by passing the previous part. Then from the table, you place it onto the floor." <n timer="0">nod> <smirk>. "You had to think like a mathematician."

He rose and returned to the board and utilized his point with the problem. He reduced the integral into one that we previously solved.

I once had coffee with Dr. Cooperman at the student union building. He mentioned that he worked in Los Alamos on the Manhattan project. He was responsible for the device that would initiate the detonation at a certain altitude. He didn't speak of the science, but the conditions on the job. They deeply hated the general that was running things because they were horribly overworked and sleep deprived. Among them was a guard stationed with a machine gun at the lookout tower at the entrance

to Los Alamos. (I later saw the tower he spoke of when I traveled to Los Alamos. The tower is now gone.)

The sentry was dozing and when the general's jeep arrived, the man was startled awake. He fired his machine gun at it. He stopped when he fully recognized who it was. Dr. Cooperman said "We all thought



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ALEXANDER CASTI

the guard was crazy, but not because he fired on the general." He paused. "It was because he still had ammunition left to finish the job." <n timer="0">nod> <smile>

Dr. Philip Cooperman is listed as a Manhattan Project Veteran and a member of its Special Engineer Detachment. I wrote to the military archives in St. Louis, but haven't received a reply.

At twenty-one, I never imagined friends, relatives, or professors passing away. I wish I could have seen his photos and asked a hundred questions I didn't yet have the ability to formulate. Along with the calculus, I regret not taking notes on his commentaries and quips.

For any student that receives the Dr. Cooperman award, I would tell them, "This is an honor named for a man who served his country and students, and one for whom you would have cared."



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