

Several years ago, Judie and I flew to Washington, DC and were collected from Dulles International Airport by her son Matt. We were there to celebrate the wedding of one of Judie's three granddaughters. We were driven to Matt's home in Arlington, which was quite different from anything I had experienced. After entering the front door, steps are climbed to a truncated plateau. From there the option is to turn left upstairs to the main part of the house or go forward, down another set of stairs into a garden level basement that looks out onto a postage stamp backyard. It struck me as strange as I grew up in Wyoming where about the only place with restricted space for building is Rock Springs. Also, I was still living in my house on Lansing Street which had a full basement and a backyard larger than the lots used for building McMansions.

While we were there, Matt gave us the Cook's Tour of metropolitan Washington. The closest I came to seeing something of interest to me was when we passed the gate to Arlington National Cemetery, with Robert E. Lee's plantation house setting on a far hill. Otherwise, buildings and monuments are just that, where ever you find them. He also took us out to the site of Bull Run, where the Union Army should have learned that attacking up hill was a bad idea. That was before I had my second hip replacement, but I managed to get out of the car and hobble around for a few minutes. Unfortunately, pain prevented me from gaining any intuitive information about the fighting on that hillside.

After the wedding, we attended the Reception at a downtown Washington restaurant. The food was good. The company was even better. I was seated next to Ken, the maternal grandfather of the bride. He is a retired Nuclear Physicist who had worked at the national laboratory in Oakridge, Tennessee. He is an extremely interesting man to converse with. I asked him if he had

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worked on the bomb. He replied that he had worked with fissionable materials for nuclear weapons during the cold war.

I decided that Ken could probably answer a question that had been bugging me for years: “How can a particle be created by the act of observation?” He answered my question in terms I could understand. He said when tremendous energy is directed into an infinitesimal space, a subatomic particle is created and when the energy is shut off, the particle disappears.

I had waited a long time for that information. In physics, during my senior year in high school, we had covered the *law of the conservation of matter and energy* which states, *neither matter nor energy can be destroyed, but one can be changed into the other*. The concept of producing energy from matter was easy to understand. Any combustion facilitates matter changing to energy, but energy changing to matter has never been part of my experience.