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Fellow members of the North Pacific Surgical Association, guests, family and friends; thank you for sharing this time with me today and thanks for being an ongoing source of inspiration for me. **Fig. 1** I am indebted to the opportunity to become President by two Past Presidents, William Fletcher and John Vetto. Dr. Fletcher stopped me in the hallway at the University Hospital in Portland one day when I was a young attending and said, 'Ah, John, I have something for you.' From the pocket of his white coat he pulled out an application for the North Pacific Surgical Association with the sponsor line already signed. He said, 'You should join this organization.' And, of course, I did! And I am indebted to John Vetto who asked me to succeed him as the Recorder of our publications about eight years ago. Both he and Cliff Deveney helped me immensely with that very rewarding but painstaking, six-year job and I greatly appreciate it. Thank you, John, for having the confidence in me to ask me to serve this association in that way.

The North Pacific Surgical Association is, I love to say, an unequalled regional surgical society. I feel that we are fortunate to be a part of this unique association for several reasons. One of the aspects that I enjoy the most is that we are a melding of surgeons from both the United States and Canada. I always look forward to honoring Remembrance Day during this meeting and to toasting the Queen at our banquet with our Canadian colleagues. Having both US and Canadian surgeons brings unique perspectives from our different countries and cultures to our discussions. And we are

also an unusual blend of academic and community surgeons. Some of our active members are Professors of Surgery at world-renowned institutions practicing in urban centers and some are community surgeons practicing in rural environments where the CT scan technician has to be called in from home. Some members practice surrounded by students, residents, and fellows and many do everything themselves because who else would do it? Most of us are somewhere in between. And yet, I think those of you who have participated in our meetings and our leadership councils will agree, that at the North Pacific Surgical we are all equals. Everyone's opinion is as good as another's. I hope we will always support this enriching atmosphere.

I have entitled this talk 'Pioneers, Heroes, Brooders, Surgeons' for reasons which I will explain. The focus of this talk will include much about the past and some thoughts about the future. My hope is to inspire you, especially those of you just beginning your surgical careers, in as much of a positive way as I have been inspired by talks like these. First of all, I think you will agree with me that a review of the list of our Past Presidents and our deceased members in our program book includes many pioneer surgeons of this region of the country and also many heroes. And many of our present members, many of you here today, are heroes to many of us. Whether or not many of our pioneers and heroes were brooders, I do not know, but I suspect they were and that many of you, like me, are.

Last year our President, Neely Pantton of Vancouver, gave a memorable talk which I greatly enjoyed on his pioneering journey in surgery from his family origins of seafarers from the Cayman Islands to the heights of surgery in Canada.¹ The first portion of my talk today is inspired by Neely's talk. I found his and his family's adventuresome stories compelling and so I am going to take a chance and assume that you might also be interested in mine. All of us certainly have interesting origins and so I am not at all thinking that my family's journeys are unique. In fact, I'm certain that everyone in this room has a unique and inspiring family journey and ancestry.

Our heritage, I would like to emphasize today, is important to our education, our training, our professional growth, and also to our psychological well-being. Our heritage is important for us personally and it is important for us collectively as surgeons. Through our family histories we realize that our lives are built upon and influenced by many different decisions, indecisions, actions, inactions, and the luck of the draw. My wife Amy and I started researching our

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Fig. 1. John Mayberry, MD, FACS, President, North Pacific Surgical Association, 2018.

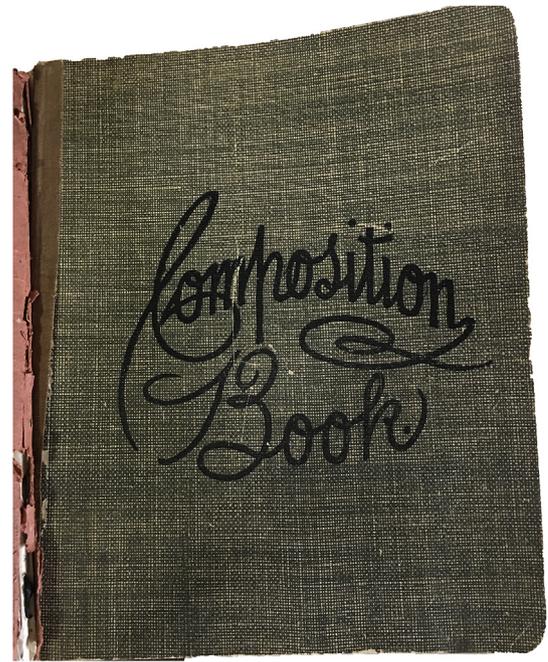


Fig. 2. The diary of my great-grandmother, DeEtta Deffinbaugh, of the Oregon Trail, 1896–7.

genealogies several years ago and we were fascinated by what we found. We spent hours sitting up late at night learning about our families. We found we were descended from sailors, doctors, farmers, business owners, homemakers, and teachers as well as having connections to royalty. I discovered I am descendent of the Stuarts of Britain. We both found Revolutionary War veterans. One of my ancestors apparently fought on Bunker Hill. Both of our families emigrated from Europe to North America and year by year moved progressively West finally ending up in Idaho, Montana, Washington and Oregon.

Pioneers

Pioneers, of course, are people who move forward into the unknown in the hope of finding something better than what they have. And I think that knowing that you are descended from pioneers is inspiring and encouraging. Knowing that my family has a pioneering heritage with ancestors who have walked unusual and difficult paths has given me personal encouragement in both easy and difficult times. And I will assert that the same is true for us collectively as surgeons.

When my great-grandmother, DeEtta Deffinbaugh, was fifteen her family decided that it too difficult to make a living farming in Kansas and heeded the call of relatives already homesteading in Montana to join them. In the spring of 1896 they set out in a wagon train of two families from Beloit, Kansas. We are fortunate that DeEtta kept a diary of their travel along the Oregon Trail arriving in Oregon City in the fall of 1896, wintering there, and then setting out for Montana in the spring of 1897.² Fig. 2 Of course, the idea of wintering in Oregon was purely practical. If one was planning to start a homestead in Montana, you could not arrive in the fall and expect to survive the winter!

Here are a few excerpts from her diary:

Saturday, June 13, 1896 “We have not had a very pleasant day for traveling as it rained some and the roads have been terrible rough. We took dinner today by the Sweetwater River and also the Independent Rock, a solid rock covering twenty-five miles across and they say there is over thirty-five thousand ton of solid rock in it. It

somewhat resembles a hay stack. Mary Lizzie & I took off our shoes and climb to the highest point. Liz & I wrote our names on the top with tar.” She is referring to Independence Rock in Central Wyoming, aptly nick-named ‘The Birthplace of American Graffiti’!

Along the way they had to use potentially dangerous ferries to cross the rivers. Monday, June 22 “It was after ten o'clock this morning when we got across the ferry. There were seventeen wagons of us so the ferry made quite a small fortune. We were the last ones across. There was a man drowned in the River just a short time ago, they haven't found him yet as the River is up terrible.”

The road could be very rough, apparently especially in Southern Idaho, home to the Craters of the Moon National Monument. Tuesday, July 7th “We were coming around some lava beds all day and they were just terrible when we would run on any of the rocks the wagon would bounce and almost jerk a fellow out. Those lava beds are just like melted iron running all over and they are just as hard as iron. They cover acres of land.”

But there were many pleasures. Wednesday July 8th “We are camped tonight near the finest spring I ever saw, it is larger than lots of creeks and runs out of a big butte, there are small springs all around it. Ez & Mr. Anderson caught three trout this evening. We camped about five o'clock as the horses were tired and the men wanted to fish.” I believe she is describing the origin of Silver Creek, Idaho, now considered one of the finest trout fishing spots in the world and home to the Hemingway Silver Creek Preserve.

And unfortunately for my great-great grandfather, but I suppose appropriate since his great-great grandson would make his academic career on the subject, there were rib fractures. Thursday, Sept 24th “Pa was walking and driving this morning and the trees are so close to the road some only far enough apart to let the wagon through and there was a tree quite close to the wagons but he thought he could go between all right but the wheel hit a rock on the other side & threw the wagon over on him and hurt him awful bad. We was all scart. He thinks it has broken some of his ribs. But it might of killed him.”

After wintering in Oregon City, they ferried their wagon up the Columbia River to The Dalles and made their way to Beaver Creek,

Montana where the original homestead is still in our family. Along the way they spent a few days in Yellowstone Park. Saturday June 26th “We passed lots of hot springs this afternoon where the water just boiled out, one lot of springs was called Elk Park. Then we came to the Norris Geyser Basin. The first one was called the Devils Ink Stand and the water was black boiling up in the middle. The next was the Minite Man a geyser where the water went up about fifty feet. It was just lovely just roared terrible. The next group was called Congress Geysers then there were lots of other large ones. One was Constana one lovely large one that just sounded terrible was surrounded by a formation of white and blue. It looked like cristalized glass. It was the beauty of them all. It only went off one or twice a week but made a terrible roaring noise and the steam was something terrible.”

Three years later DeEtta married Frank Bristol, a local cowpoke and part-time farmer, who had first come to Montana in 1888 from North Dakota to work in the silver mines. During one of his travels on horseback he traversed the land that would eventually become his homestead. From his obituary in 1961, ‘A man with an uncanny memory, he recalled riding horseback into the Judith Basin though the Judith Gap and crossing over to Beaver Creek and never seeing a fence. The grass was up to the stirrups of his saddle.’ He had recently returned from the Philippine American War with the 1st Montana Infantry Volunteers, Company I. Fig. 3.

That same connection with pioneering in my family that gives me personal pride, can be the same for all of us as surgeons. We, as surgeons, have a rich history of surgeon pioneers who braved difficulties and the unknown to accomplish great things.

The first known written record of a surgical practitioner occurs in the Sumerian tablets of three to five thousand years ago.^{3,4} Called the *Asu*, they were knowledgeable in variety of medical and surgical treatments. Scalpels and associated instruments from this era have been discovered and it is known that the *Asu* could be assigned to military units. Both genders were believed to have been represented.⁵ The Sumerians had a developed society. They invented

writing, drew up the first code of laws, had large cities with sewer systems and paved streets. They had a ‘public works administration’ that oversaw canal irrigation. The Sumerians used cement to attach objects to each other, named constellations, made glass, flushed their toilets, brewed beer, invented sailboats, played the lyre, held wrestling matches and races, invented the lunar calendar, sent their children to school, and paid taxes! So, we should not be surprised to hear that their surgeons were also well-developed. An *Asu* is conjectured to have performed a thoracotomy between the eighth and ninth ribs, perhaps to drain an empyema.⁶

Following the Sumerians came unnamed Egyptian surgeons (1600 BCE), Sushruta of India (600–500 BCE) and the Grecian Hippocrates (400 BCE). In the first millennium were the Romans Celsus (25 BCE – 50 CE), Soranus (78–117 CE), and Galen (129–216 CE), and at the beginning of the second millennium were Albucasis of Cordova (d. 1013 CE) and Avicenna of Persia (d. 1037 CE). I encourage you to delve into the writings of Hippocrates, Celsus, Galen, Albucasis, and Avicenna.^{7–10} I think you, like me, will be astounded because in many sections, their discussions, explanations and recommendations (especially in the textbooks of Albucasis and Avicenna), could easily be transplanted into one of our modern textbooks. By the times of Borgognoni of 13th Century Italy, Guy de Chauliac of 14th Century France, Brunschwig of 15th Century Germany, and Ambrois Pare’ of 16th Century France, surgical practice was quite advanced. From my review of surgical history over the past several years which I have done in preparation for a manuscript on the history of rib fracture management,¹¹ I have concluded that the ‘Dark Ages’ did not have the same dramatically negative effect on surgery that it had on other disciplines.

Ambrois Pare’, the French military surgeon, is a particular favorite of mine. He wrote, “Chyrurgerie is an Art, which teacheth the way by reason, how by the operation of the hand we may cure, prevent and mitigate diseases, which accidentally happen to us.”¹² He was a flamboyant individual and traveled greatly, creating a stir or finding himself in a stir wherever he went. He denounced cauterization of wounds in favor of ligatures and poultices. His description of the treatment of an open chest wound caused by the discharge of an ‘arquebuse’ is truly heroic. He wrote, “I saw he cast blood out of his mouth and his wounds. Moreover he had a great difficulty of breathing, and cast out wind by the said wounds with a whistling, in so much that it would blow out a candle, and he said he had a most sharp prickling pain at the entrance of the bullet. I do believe and think it might be some little pieces of bones which pricked the lungs. When they made their systole and diastole, I put my finger into him; where I found the entrance of the bullet to have broken the fourth rib in the middle and scales of bones which the said bullet had thrust in, and the outgoing of it had likewise broken the fifth rib with pieces of bone which had been driven from within outward. I drew out some but not all, because they were deep and very adherent.”¹³

Pare’ devised a poultice of egg yolks, turpentine, and oil of roses which allowed for the ‘flux of blood’ but did ‘hinder that the outward air did not enter into the chest’. He ‘bound him up, but not hard, to the end he might have easy respiration’. He wrote further, “And as for the pain which he said he felt at the entrance of the bullet ... that was because the lungs by their motion beat against the splinters of the broken rib. Now the lungs are covered with a coat coming from the membrane called pleura, interweaved with nerves of the sixth conjugation from the brain, which was cause of the extreme pain he felt; likewise he had a great difficulty of breathing, which proceeded from the blood which was spilled in the thorax, and upon the diaphragm, the principle instrument of respiration, and from the laceration of the muscles which are between each rib which also help also to make the expiration and inspiration.”¹³



Fig. 3. ‘Dogtag’ of my great-grandfather, Frank Bristol, 1st Montana Infantry Volunteers, Company I, Philippine-American War.

Pioneers are common among surgeons as far back as has been recorded. We have a long and proud history of discovery, innovation, and progress.

Heroes

My first exposure to a surgeon and my first hero in surgery was Roger Alberty, of the Portland Clinic and of St Vincent's Hospital. He was the first surgeon I worked with on the wards as a medical student. I think those of you who know Roger will agree with me that you could think of few better surgeons to give you a favorable first impression of our profession. He was instrumental in my early decision that year to become a surgeon. Roger treated me, even though I was a green and insecure third year student, respectfully, speaking to me as if I were an adult, almost a colleague. He always had time for me and he expected high standards and high ethics. During those years the AIDS epidemic was just beginning and many of us had questions about our risk of exposure to HIV during surgery. I wondered aloud one time in his presence, whether we had the right to decline to operate on a patient at risk for HIV, that is, whether we would be justified in refusing to put our lives at risk to save theirs. I remember him responding unhesitatingly, 'Should not even be a question.'

James Peck, our President in 2003, is also one of my heroes. When I first met Jim, he was a young surgeon partnering with Roger Alberty. He was also a great example for a future surgeon to see. No surgery for him was too difficult or too long. And he has remained constant in his enthusiasm. I cannot say enough about the daring nature of his most recent exploits with Doctors Without Borders.

Thinking about Dan Dennis, a fellow Montanan, always brings a smile. In those days in the surgeon's lounge at St Vincent's Hospital there was a sign stating, 'Your colleagues request that you not smoke in this lounge' signed by the Chief of Surgery. And, of course, every afternoon between surgeries, that is exactly where Dan Dennis would be, sitting in the easy chair beneath that sign wearing his scrubs, surgical hood, and long scrub coat, smoking, with what I always called 'a shit-eating grin'. Whenever he would hear us residents complain, he would say, 'You know what I'm going to do when I retire? Become a resident!'

Karen Deveney is one of my greatest heroes. Karen, as many of you know, is a person of intense passion and boundless compassion, a very unusual combination. Those of us who were residents under her guidance are without exception filled with gratitude to her. I still do my small bowel anastomoses exactly the way she taught me.

Cliff Deveney, too, is one of my heroes. His always thoughtful and never 'knee-jerk' approach to both common problems and surgical conundrums stood out from the other attendings. He was always kind to me. I can still hear him say to me with a mischievous smile, 'Maybe you're right – but maybe you're not!'

Richard Crass is my hero because he was, by his own admission, 'an equal opportunity harasser'. He was fond of saying, 'I harass everybody.' And it was true, but he was able to make you admire him for it. I told Rich, when I was his Chief Resident at the University, that my number one goal was to make him tired. I failed.

Don Trunkey, as my fellow surgical resident Brian Gilchrist liked to say, was Lincoln-esque. Always a calm demeanor, always a joke or an anecdote ready, and always leading others where they were afraid to go. Like Lincoln he was tall, lanky, and folksy and was raised in a rural environment among family that favored hard work. And like Lincoln, he rose to the top of his profession. I never heard Don Trunkey character assassinate anyone. The most negative thing, and it's not even all that negative, I ever heard him say about another surgeon publicly or privately, was, 'He's an iconoclast'. Some people might even say that's a compliment! And that attitude

of acceptance permeated down from him into the surgery faculty at Oregon. I consider myself very privileged to have trained with him.

And among my mentors I must save the best for last. Rich Mullins, who I am very grateful to have join me here today, has had a huge impact on not only my surgical career but on my personal life. He took me in as his partner and believed in me. And he did not control me, he gave me a long leash. His mentoring style let me know that he trusted me which is probably the best thing you can do for a young surgeon. My favorite Rich Mullins quote is, 'You're right and I know you're right, but I disagree with you.' I believe he said this while discussing a fine point of trauma care with Don Trunkey!

Heroes inspire us, and we need them because they encourage us to realize that we too can accomplish great things. In living and working with them day by day we realize that they are not superhuman, but they are in fact, not much different than ourselves. They do the same things we all must do; get up every morning and come to work ready to work and stay at it until the job is done. They try to do the right thing and they encourage us to do the right thing. They commit themselves to a cause and they stick with it. We see that they have more than personality, they have character. And we see that adversity doesn't turn them away. They move forward and we naturally follow.

General Norman Schwarzkopf said, 'It doesn't take a hero to order men into battle. It takes a hero to be one of those men who goes into battle.'¹⁴

Brooders

Fellow surgeons, I have a confession to make. I am a brooder. And there is no sense apologizing for it, because I know I am in good company. Many years ago, Rich Mullins shared with me a military memoir entitled 'Bonnie-Sue: A Marine Corps Helicopter Squadron in Vietnam' by Marion Sturkey.¹⁵ Sturkey was a Marine pilot of the H-46 Sea Knight, a tandem rotor transport helicopter used to deliver assault forces, supplies and to perform search and rescue and casualty evacuation. Sturkey relates, "Marine helicopter pilots are a gregarious and strange lot. Grim and fatalistic humor is a way of life. Jokes about all manner of in-flight emergencies and combat hazards are part of the game."^{15(p156–7)} Sound familiar? Harry Reasoner of ABC News, after interviewing Vietnam helicopter pilots said it best, "A helicopter does not want to fly. It is maintained in the air by a variety of forces and controls, working in opposition to each other. And if there is a disturbance in the delicate balance, the helicopter stops flying immediately and disastrously. This is why ... all helicopter pilots are brooders, introspective anticipators of trouble. They know that if anything bad has not happened – it is about to." (February 16, 1971)^{15(p. 157)} We surgeons are very much like helicopter pilots. Joking on the outside and brooding on the inside.

I brood about complications of surgery. We have all known surgeons who did not seem to care about whether their patient had a complication or not. Whether that surgeon lacked empathy or whether their main concern was to get on to the next surgery, it is difficult to say. But we should not emulate the uncaring surgeon. William Ogilvie of Guy's Hospital, London admonished the surgeon to 'haunt the postoperative ward, all day and all night'.¹⁶ Of course, this is not completely practical, but we must concern ourselves with the frequent evaluation of our patients post-operatively and be constantly mindful that our surgery, however skillful, may not turn out as well as we hoped. We are often blind to our own complications and poor decisions. In the times that a colleague has pointed out to me a concerning issue on a patient on whom I have operated, I have found 9 times out of 10 that they have been right.

I brood about bias. Bias is what you see before you look, and it is

rampant among us. Bias is the muscle behind gender and racial discrimination and it also affects how we interact with our patients – how we treat them personally and medically. Bias also affects our impetus to innovate – to imagine a better way. Fortunately, there is now an education science that seeks to fight bias in medicine.^{17–19} Reflection is ‘a metacognitive process that occurs before, during, and after situations with the purpose of developing greater understanding of both the self and the situation so that future encounters with the situation are informed from previous encounters’.¹⁷ Reflective practice involves getting into the habit of taking the time to reflect critically. And interestingly, fatigue hampers reflective thinking.²⁰ When you are tired you may think you are drawing on your vast experience when you are not. Fighting bias by reflective thinking is critical to our professional advancement and to the advancement of surgery. Again, I turn to Ogilvie who wrote in 1936, “All operations that can be done, or nearly all, may have been done. Yet it does not follow, because no striking innovations are to be expected, that further advance is unlikely. Advance does not necessarily mean progress to something new – it means progress to something better; and improvement very often awaits the application of principles that are so simple and familiar that we have become oblivious of their presence.”²¹

I brood about distractions. Fig. 4 When I was a resident at Oregon, I frequently worked with John Porter, the famed vascular surgeon. Many of you remember he liked to do the distal anastomosis on a below knee bypass and he would be seated as he did. I assisted him many times. Dr Porter hated distractions while operating, particularly from the telephone. I watched one time as he was applying 6 0 prolene to the vein and a tibial artery when the phone rang on the wall behind him not more than a few feet away. He rolled back while still seated, reached up, latched on to the console, applied his full weight, and dislodged the apparatus from the wall! That incident blazed an important concept in my mind. Distracted operating, just like distracted driving, is not safe.²²

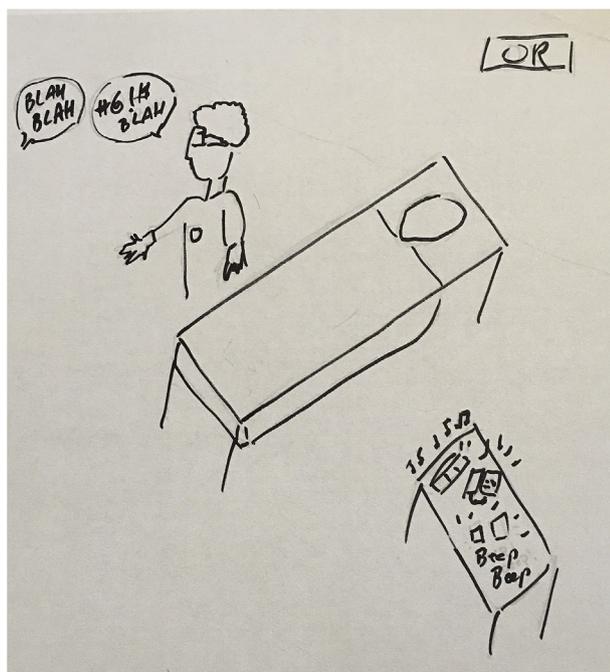


Fig. 4. The many distractions of a surgeon in the operating room; conversations, telephones, cellphones, pagers, music (as envisioned by Eliza Mayberry, age 15).

Surgeons

We have a very unique profession. We intervene physically against the patient's disease, often dramatically, with our hands, our instruments and our brains. And, in spite of the arduous training, the prolonged and unpredictable working hours, and the psychological stress that we allow upon ourselves, we must admit that we do enjoy it. We have a job description that is among the most enviable of all professions. And the public, our patients, have entrusted us with their own bodies, at a time when they are most vulnerable.

To our patients then, we need to be clear about our confidence in our abilities and our experience. We need to give them hope in what may be their darkest day. And in our face to face interaction with the patient and their family we need to establish a connection and let them know we care about their well-being. And not only that, but that we recognize their individuality. This can be done in a variety of ways, most often by taking the extra time to participate in a few minutes of unrelated conversation, whether commiserating with them in their unexpected personal disaster or lightening up an over-serious situation with a salty or well-timed joke. We have all seen our mentors do this from time to time and we can do the same.

And to each other we must balance our hubris with humility. We must hold ourselves and our colleagues to very high standards. But we must not accomplish this in an overly critical and destructive way. We need to have constructive and open conversation about surgical treatments and outcomes without subsequent and undefended character assassination. I think it is important to remember that all of us with rare exception are the ‘cream of the crop’. Every surgeon you work with in your hospital has gone through a challenging and prolonged process to practice surgery just like you have. None of us is really all that much better than the other. Because we are all members of such a noble profession, I urge us to be careful what we say about fellow surgeons behind their backs. I must ashamedly say that I have not always followed this mantra and so I am mostly talking to myself. As my friend and colleague, Matt Macha, emphasizes and I agree wholeheartedly, none of us are truly experts. You should never say you are an expert, ever. Every surgeon has something more to learn.

In conclusion, I am very grateful for how things have turned out for me and I am very grateful to have friends and colleagues like you. But I know this, as happy with my career as I am, I certainly did not painstakingly plan it out. There has been a lot of luck, pluck, and goodwill from family, friends, and colleagues. Garrison Keillor said, ‘Some luck lies in not getting what you want, but in getting what you have. Which is what you really would have wanted, had you known.’²³ This is similar, I think, to what John Lennon meant when he said, ‘Life is what happens when you're busy making other plans.’²⁴ And to what Jesus meant by, ‘The kingdom of God does not come with observation ... the kingdom of God is within you.’²⁵

But Eleanor Roosevelt said it the best, ‘Life is what you make it. Always has been, always will be.’²⁴

I thank you for the honor of serving as your President this year.

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