Thank you. This is more than I can actually express. It is quite an honor and has been an absolute joy.

Thank you, Lars, and thank all of you for this amazing honor and for a truly wonderful meeting filled with excitement, energy, and collegiality. It is through the kindness of strangers and leadership of mentors that I stand before you today. I can think of no greater responsibility or honor than serving this organization of great dreamers and pragmatists, amazing surgeons, and mentors that save lives and change the world each and every day.

You have an amazing board. They say what needs to be said when it needs to be said, for the good of the American Association for Thoracic Surgery (AATS) but also for the specialty. They truly volunteer thousands of hours each year and are passionate about the AATS and the members for whom they serve. Thank you for being my best friends and for truly supporting me during my presidency.

The program committee is the lifeblood of every president. I could not be more proud of this program committee and summit co-chairs. The creativity, work ethic, diversity, and dedication of the entire committee was unparalleled despite a record number of more than 1500 abstracts reviewed this year. Thank you and thank all of you for your hard work!

Of course, no meeting happens without the meetings team, and there is no better, more dedicated group in the world than this. I am amazed at what they can do, and I can never say thank you enough. Their dedication is matched by an incredible group of professionals on the administrative team that keep both the AATS and the AATS Foundation running all year long. They are a small and mighty team! I don’t know how they do all they do!

Lastly, where would we be without communication? We would not have a journal, a website, or an app without this group of talented people! I want to thank them for all their hard work as well!

_I have always believed that what we become depends on what we teach each other, especially at times when we don’t think we are teaching._

—Paraphrasing Umberto Eco (Figure 1)

To Mark Grinstaff at Boston University and the Massachusetts General Hospital Thoracic Surgical Research Group, our research partnership has been magical and a true gift in my academic career. To my Massachusetts General Hospital colleagues, residents, and friends, I can never, ever express my profound gratitude and the respect that I have for each of you and the honor that I feel in being part of this team. No one could ever ask for a better division, but more importantly no one could ever ask for better people. I would not have made it through the pandemic and this very busy year without your kind and unending support. I am so proud to be...
part of this group and your future. I am happy to be part of it. Thank you.

I also believe that we are changed by small gifts of wisdom from people that we meet, what we do with the challenges and opportunities we face, and how we choose to make the world a better place. Mentors and sponsors fundamentally changed my life, opened my eyes to opportunities, and truly believed in me when I did not see it. Michael Kaye at Mayo introduced me to cardiac surgery and never let on that women didn’t do this. Richard Simmons at Pittsburgh taught me how to write a grant and set the standard for excellence and a balance to ensure longevity of purpose. Pedro del Nido at Pittsburgh and Boston saw potential that I never dreamed of and has provided sound advice with unwavering belief and support beyond my wildest dreams. I can never express enough gratitude to him or to his wife Martha. David Sugarbaker gave me the chance I needed, mostly to prove to myself that I was brave enough, tough enough, and strong enough to do this. I owe my career to him, and I thank Linda Sugarbaker for her behind-the-scenes support. Valerie Rusch showed me the grace of a true pioneer, and Keith Lillemoe has been the best department of surgery chair I could ever ask for. He has taught me kind, unwavering belief in the goodness of people, residents, and faculty. I am a different person because of the wisdom, kindness, respect, and friendship of these leaders. They opened a completely new world for me and have given me a life I could never have dreamed possible without their counsel. I can only hope to repay the debt by doing the same for the next generation, because that is what makes surgery so powerful—the mentors and mentees generation after generation. Thank you.

So I must thank my other teachers and those that gave me a chance to show what I could do. From Hank Bahnson during my intern year to Adriana Zeevi and Suzanne Ildstad during my PhD and postdoc at Pittsburgh. They taught me to think completely out of the box! To my colleagues and friends at Brigham and Women’s Hospital, especially the thoracic surgery division and to David Sugarbaker, you gave me a foundation on which to grow and a lifetime of friendships. What a journey? Thank you.

To my daughters, Karinne and Azuri, for understanding why I fell asleep midsentence during story hour or why we ate at 9 pm most nights. You have never once asked why you have to do something or why we weren’t going somewhere? You have always been all in, all in for my patients, all in for us changing the world as we know it. You could have made me feel like a bad parent a 1000 times over, instead I thank you from the bottom of my heart for making me feel good about what I do every day. Thank you for helping us look after Sonoma and Inaani (whose name, by the way, means “one who’s left at home” appropriately) and for showing no mercy at video games and kung fu, so I learned humility on a regular basis. You both have made me grow as a person in so many ways. I love you and I am so proud of the wonderful, interesting people you have become.

Dad was the dreamer. His dad died when he was in high school and he could not afford to go to college, yet he worked with Elizabeth Kubler-Ross, at Martin-Marietta on the Titan rockets, and on one of the first computer operating systems for IBM. He built our entire house (electricity, plumbing, brick, everything). He went back to finish his college degree when I was in medical school, and we used to study together. He always believed that I could do anything and I miss him, especially today. Mom is the pragmatist. Without mom, the house we built would still not have bricks or shingles or probably even all of the doorknobs. She instilled the Midwest work ethic that you’re not done until the work is finished! Mom is a nurse, and she is my role model.
model of perseverance and diligence! She is here today. Thank you, Mom!

To my brothers, Shawn and Pete, thank you for tolerating your crazy older sister and for keeping me humble. This is my brothers’ favorite cartoon. The graffiti says, “I Love you Yolonda” and the astronaut in the comic says, “No, I wouldn’t exactly say it’s a sign of higher intelligence.” Thanks guys.

To Gray, we have come a very long way together since our college days. Thank you for believing we could do this, for ensuring we always wear our life vests over the rapids we call life, and for managing to keep everyone in the lifeboat when I loaded my schedule with way too many things, and we took on too much water. I know it has not been easy, but it has been fantastic to live this life with you! At least from my perspective. In short, you are absolutely my soul. I would have failed a million times and been a far lesser person if it were not for you. You are just amazing to live with, every day! I love you more than you will ever know. You, more than anyone, know that I would not be up here today were it not for you. Thank you.

So, I would like to dedicate this Presidential Address to our patients, teachers, mentors, sponsors, colleagues, family, and friends who believe in us, believe we can do anything, and inspire us to deliver extraordinary care to our patients every day—and to my parents and all the other dreamers and pragmatists in our midst. This is a story of our past, our present, and our future. We need you, all of you!

_The great driver finds a way to keep racing._
— _The Art of Racing in the Rain_!

We have been through a lot in the past few years. We have been through pandemics and epidemics, protests and civil unrest, and foreign wars. You have stepped up to deliver care to those patients in front of you in the middle of it all, day in and day out, night after night. We battle to deliver the care that used to be routine. It is not always up to your usual standards. It is hard. It is a challenge to look up and dream about better solutions, and yet, challenge is nothing new to cardiothoracic surgeons. We are here, together, as a community for more than 100 years.

As cardiothoracic surgeons, we know that unexpected things happen. “A transmission gear snaps, the clutch fails, brakes go soft from overheating. The difference is in our resilience and outcomes. The poor driver will crash. The average driver will quit. But the great driver will drive through the problem. The great driver finds a way to keep racing.” The founders and members of the AATS and all of you have pushed through challenges to get here. This has always defined our organization and you as a cardiothoracic surgeon, dedicated to becoming the best in your field.

Welcome, great drivers! As cardiothoracic surgeons, you are here because you choose to do hard things, to do great things. As great drivers, you must demonstrate expert technical skills and true resilience. The AATS helps us meet these challenges through vision, innovation, and leadership. Values instilled in this organization and our profession from the beginning, more than a hundred years ago.

Since the beginning, we have overcome challenges. These values define who we are and why we are the way we are. This is a picture of Dr Willy Meyer, the Founder of AATS. In times of challenge, he too chose to lead (Figure 2).

Born July 24, 1858, just outside Hannover, Germany, Willy Meyer was the third of 6 children of a grain merchant. After working with his uncle, Dr Jacobi, a well-known physician in New York, he chose surgery. He trained in Bonn and worked with Dr Trendelenburg writing the original paper describing the Trendelenburg position, before he emigrated to New York City in 1884 to marry his sweetheart Lilly Maass and start his medical practice. He started
at New German Dispensary that was affiliated with German Hospital (ultimately Lenox Hill Hospital), which had 2 important qualities that make him an incredible surgeon and amazing person. First, there was a women’s health pavilion. Second, there was an immigrant population from around the world in need of care. These opportunities led to his world-renowned career as a surgeon, possibly surprising to you, as a breast surgeon.

But it is a presentation at the American Medical Association meeting in Minneapolis in June 1913 that starts Willy Meyer, the breast surgeon, on the path to Willy Meyer, the founder of AATS. He presented what he expected to be a landmark paper describing the first esophageal resection for cancer by Franz Torek. But when the paper was opened for discussion, he did not receive a single question. Much of the indifference was due to an attitude of total hopelessness and a complete lack of contact with thoracic problems and proposed solutions among those in his audience. Dr Meyer became determined to rectify this situation.

NEVERTHELESS, HE PERSISTED

_The pessimist complains about the wind. The optimist expects the wind to change. A leader adjusts the sails._

—Unknown

Willy Meyer was a leader and he had a vision. From the beginning, the dream was to create a special society in which thoracic surgery problems could be thoroughly discussed. The responses from his contemporaries were pessimistic, to say the least. There were few topics people wanted to discuss. Empyema was the only one with any real possibilities of development. Aneurysm surgery was a failure. Surgery was going nowhere for bronchiectasis and lung abscess. Cancer of the lung wasn’t even considered worthy of mention. It was unlikely that there would ever be surgery of the esophagus and everyone knew that one cannot operate on the heart. Furthermore, in 2 or 3 years, everything will be said and the society will die for lack of interest. Nevertheless, he persisted (Figure 3).

You see he was also a pragmatist. He knew how to get things done and was intensely focused on his goal and made plans to create a national society. Nearly 4 years later, he held the first organized meeting of the New York Society for Thoracic Surgery at his house on Madison Avenue. Shortly, thereafter the United States enters World War I, impacting the members and the growth of the young society. Remarkably, the second meeting occurs a few months later to officially establish the national society and to elect Samuel Meltzer as the first president. More about him later.

However, less than 3 months before the first annual meeting, the first cases of influenza are reported in the United States and they will soon enter the 1918 pandemic. Yet, they held the first meeting of the AATS in June 1918, just shy of 5 years from the ill-fated talk at the American Medical Association.

Interestingly, AATS was born in a time of great challenge. They too had been through a lot. The 1918 Pandemic, the 1919 Race Riots, which involved 26 US cities, and World War I. Yet, founding AATS was critically important to these surgeons during this time! In times of challenge, they chose to lead. Why?

_The older experienced fish nods and says “Good morning boys. How’s the water?” The younger fish swim away, look at each other, and ask: “What the hell is water?” The most obvious, important things are the ones that are hardest to see and hardest to talk about._

—David Foster Wallace

FIGURE 3. Slide from Dr Colson’s presentation during her address showing the timeline of the creation of the American Association for Thoracic Surgery. AMA, American Medical Association; AATS, American Association for Thoracic Surgery.
From the beginning, Willy Meyer saw need and purpose where others saw only a field and a society that would die from lack of interest. Sound familiar? That’s called vision.

**THE POWER OF INCLUDING PEOPLE NOT LIKE OURSELVES—AATS**

From the beginning, we have done challenging things because they are the right thing to do. Through AATS, Dr Meyer challenged everyone to create, improve, and expand thoracic surgery. He started by embracing the impossible problems that would limit the success of thoracic surgery. The critical, so-called impossible problem of the time was safe ventilation for thoracic surgery and Dr Meyer befriended Dr Sauerbruch and worked to improve the differential pressure box. Meyers and his brother, Julius, designed a universal chamber with both negative and positive pressure chambers and, in his typical fashion, assigned the patent not to himself but to the people of the United States.

However, there was a competing solution. He challenged the new idea of intratracheal ventilation, but, despite his own time and investment in the pressure box, when Dr Meyer saw it was superior, he embraced it and championed the inventor Dr Samuel Meltzer. From the beginning, he built a culture that taught us by example to champion the best solutions for our patients. Even if it is not your idea. That freedom leads to the best innovations for our patients. Even if it is not your idea. That freedom leads to the best innovations for our patients. He made the difficult choice of supporting someone else’s solution over his own, because it was the right thing to do for his patients. In times of challenge, he chose to lead.

But how do you invent the unknown? The success of intratracheal intubation demonstrates the power of including the whole community in the solution, cultivating diverse opinions, and including people with different perspectives. Fundamentally, Dr Meyer insisted AATS include not just surgeons, but a range of health care professionals who could contribute their knowledge to advance the field. It was named American Association *for* Thoracic Surgery at his insistence (Figure 4). He welcomed everyone—surgeons, internists, physiologists, radiologists, endoscopists. More than one-fourth of the founders shown on this roster did not list surgery as their primary specialty (Table 1).

In fact, the first president of AATS, Samuel Meltzer, was an internist and experimental physiologist. Remember, he was the father of intratracheal anesthesia and, in fact, Willy Meyer nominated and advocated for him to be the first AATS president because of this contribution to the field. Dr Meyer practiced what he preached—the American Association for Thoracic Surgery.

Like many, Willy Meyer started with an impossible problem and an idea, but then he recruited the best ideas from everyone and welcomed all of them into a collaborative group to build on each other’s ideas. More importantly, he was willing to champion the best solutions, even though they were not his own. That is real humility and real leadership. From the beginning, AATS has been built by the power of including people not like ourselves.

Through vision, innovation, and leadership, Dr Meyer created a paradigm shift to a new reality for thoracic surgery and set the foundation for a new society and a new specialty. We have faced many, many challenges over the past century. During times of challenge, we as a profession have chosen to lead. However, challenges in cardiothoracic surgery in the next 100 years will be just as fundamental and the pace of change will be unprecedented.

**FIGURE 4.** Slide from Dr Colson’s presentation during her address displaying a quotation from Dr Meyer about including broad membership in the American Association for Thoracic Surgery. AATS, American Association for Thoracic Surgery.
### TABLE 1. Founding members of the American Association for Thoracic Surgery (AATS)³

<table>
<thead>
<tr>
<th>Name</th>
<th>Born–died</th>
<th>School</th>
<th>Home</th>
<th>Specialty</th>
</tr>
</thead>
<tbody>
<tr>
<td>E. Wyllis Andrews</td>
<td>1856–1927</td>
<td>Chicago—1881</td>
<td>Chicago, Ill</td>
<td>Surgery</td>
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<tr>
<td>John Auer</td>
<td>1875–1948</td>
<td>Johns Hopkins—1902</td>
<td>New York, NY</td>
<td>Physiology</td>
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<tr>
<td>Edward R. Baldwin</td>
<td>1864–1947</td>
<td>Yale—1890</td>
<td>Saranac Lake, NY</td>
<td>Tuberculosis</td>
</tr>
<tr>
<td>Walter M. Boothby</td>
<td>1880–1953</td>
<td>Harvard—1906</td>
<td>Rochester, NY</td>
<td>Anesthesia</td>
</tr>
<tr>
<td>William Branower</td>
<td>1881–1943</td>
<td>P&amp;S—1904</td>
<td>New York, NY</td>
<td>Anesthesia</td>
</tr>
<tr>
<td>Harlow Brooks</td>
<td>1871–1936</td>
<td>Michigan—1895</td>
<td>New York, NY</td>
<td>Internal Medicine</td>
</tr>
<tr>
<td>Lawrason Brown</td>
<td>1871–1937</td>
<td>Johns Hopkins—1900</td>
<td>Saranac Lake, NY</td>
<td>Tuberculosis</td>
</tr>
<tr>
<td>Alexis Carrel</td>
<td>1873–1945</td>
<td>Lyons—1900</td>
<td>New York, NY</td>
<td>Experimental Surgery</td>
</tr>
<tr>
<td>J. Frank Corbett</td>
<td>1872–1951</td>
<td>Minnesota—1896</td>
<td>Minneapolis, Minn</td>
<td>Surgery</td>
</tr>
<tr>
<td>Armistead C. Crump</td>
<td>1879–1966</td>
<td>Virginia—1903</td>
<td>New York, NY</td>
<td>Endoscopy</td>
</tr>
<tr>
<td>Charles N. Dowd</td>
<td>1858–1931</td>
<td>P&amp;S—1886</td>
<td>New York, NY</td>
<td>Surgery</td>
</tr>
<tr>
<td>Kennon Dunham</td>
<td>1872–1944</td>
<td>Cincinnati—1894</td>
<td>Cincinnati, Ohio</td>
<td>Radiology</td>
</tr>
<tr>
<td>Ed. Melchior Eberts</td>
<td>1873–1945</td>
<td>McGill—1897</td>
<td>Montreal, Canada</td>
<td>Surgery</td>
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<tr>
<td>Max Einhorn</td>
<td>1862–1953</td>
<td>Berlin—1884</td>
<td>New York, NY</td>
<td>Gastroenterology</td>
</tr>
<tr>
<td>Herman Fischer</td>
<td>1871–1942</td>
<td>P&amp;S—1896</td>
<td>New York, NY</td>
<td>Surgery</td>
</tr>
<tr>
<td>Albert H. Garvin</td>
<td>1881–1952</td>
<td>Yale—1903</td>
<td>Ray Brook, NY</td>
<td>Tuberculosis</td>
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<tr>
<td>John A. Hartwell</td>
<td>1869–1940</td>
<td>Yale—1892</td>
<td>New York, NY</td>
<td>Surgery</td>
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<td>George J. Heuer</td>
<td>1882–1950</td>
<td>Johns Hopkins—1907</td>
<td>Baltimore, Md</td>
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<td>Adrian V. S. Lambert</td>
<td>1872–1952</td>
<td>P&amp;S—1896</td>
<td>New York, NY</td>
<td>Surgery</td>
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<tr>
<td>Arthur A. Law</td>
<td>1872–1930</td>
<td>Minnesota—1894</td>
<td>Minneapolis, Minn</td>
<td>Surgery</td>
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<tr>
<td>William Lerche</td>
<td>1867–1961</td>
<td>Illinois—1897</td>
<td>Minneapolis, Minn</td>
<td>Surgery</td>
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<td>Morris Manges</td>
<td>1865–1944</td>
<td>P&amp;S—1887</td>
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<tr>
<td>Walton Martin</td>
<td>1869–1949</td>
<td>P&amp;S—1892</td>
<td>New York, NY</td>
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<tr>
<td>Rudolph Matas</td>
<td>1860–1958</td>
<td>Tulane—1880</td>
<td>New Orleans, La</td>
<td>Surgery</td>
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<tr>
<td>E. S. McSweeney</td>
<td>1877–1944</td>
<td>Bellevue—1898</td>
<td>New York, NY</td>
<td>Tuberculosis</td>
</tr>
<tr>
<td>Samuel J. Meltzer</td>
<td>1851–1932</td>
<td>Berlin—1882</td>
<td>New York, NY</td>
<td>Internal Medicine</td>
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<tr>
<td>Willy Meyer</td>
<td>1858–1932</td>
<td>Bonn—1880</td>
<td>New York, NY</td>
<td>Surgery</td>
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<td>James A. Miller</td>
<td>1874–1948</td>
<td>P&amp;S—1899</td>
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<td>Robert T. Miller</td>
<td>1878–1960</td>
<td>Johns Hopkins—1903</td>
<td>Pittsburgh, Pa</td>
<td>Surgery</td>
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<td>Fred J. Murphy</td>
<td>1872–1948</td>
<td>Harvard—1901</td>
<td>St Louis, Mo</td>
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<tr>
<td>Leo S. Peterson</td>
<td>1887–1918</td>
<td>P&amp;S—1911</td>
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<td>Anesthesia</td>
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<td>Walther I. Rathbun</td>
<td>1878–*</td>
<td>Yale—1903</td>
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<td>Martin Rehling</td>
<td>1866–1936</td>
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<td>B. Merrill Ricketts</td>
<td>1858–1926</td>
<td>Miami—1881</td>
<td>Cincinnati, Ohio</td>
<td>Surgery</td>
</tr>
<tr>
<td>Samuel Robinson</td>
<td>1877–1947</td>
<td>Harvard—1902</td>
<td>Rochester, Minn</td>
<td>Surgery</td>
</tr>
</tbody>
</table>

(Continued)
THE CHALLENGING LANDSCAPE OF CARDIOTHORACIC SURGERY REQUIRES THAT WE THINK DIFFERENTLY

We have just started to get a glimpse of an unimaginable future with the rapid development over just a few years of messenger RNA vaccines, immunotherapy, telemedicine, and the ability of artificial intelligence to identify new drug targets in days, not years. Change will be challenging. Innovation will be rapid, disruptive, and complex. Competition will be both internal and external. Changes in demographics, education, and institutions will impact society. Financial ramifications of labor and technology are significant.

As surgeons we will be asked to re-think what is cardiothoracic surgery? What outcomes do patients truly value? What is the role of surgeons in health care (Figure 5)?

We know all of these operations are cardiothoracic surgery. But what about these catheter-based procedures or cryo- or radioablations? In the National Cancer Institute Dictionary of Cancer Terms, surgery is defined as "A procedure to remove or repair a part of the body or to find out whether disease is present." There is no mention of an incision. The American College of Surgeons and the American Medical Association issued a joint statutory definition of surgery, where surgery is defined as "structurally altering or transposing live human tissue or destruction of tissues." So perhaps as times change and technology rapidly accelerates, we need to define surgery a little differently. Not by the size of the incision, or even its presence, but rather by the structural alterations required to treat or diagnose disease. We will need to widen our view of surgery if we want to see what is possible.

Change in surgery is accelerating from open surgery to minimally invasive to robotic surgery, which is now a $20 billion market. But it is only the beginning, with digital surgery (including visualization in hybrid, augmented, virtual, and extended reality) improving outcomes and allowing for better preoperative planning and intraoperative navigation.

Soon we will have nanodevices like nanofish, nanomachines, and nanorockets structurally altering tissues, destroying tumors, and moving molecules around in the human body. Technology will continue to evolve and provide new opportunities for treatment of conventional cardiothoracic disease and will challenge our concepts of cardiothoracic care and surgery.

We are being asked to think bigger, explore bolder solutions, deliver globally, universally, and at lower cost. As I look out onto the Western Sahara Desert, I realize the importance that resilience will also play in the challenging landscape of cardiothoracic surgery.

Water is the element of change and like water, we, as cardiothoracic surgeons, are characterized by adaptability.

FIGURE 5. Slide from Dr Colson’s presentation during her address displaying questions surgeons need to consider. CT, Cardiothoracic.
If we prepare for change, the opportunities for our patients and our field, are unimaginable. We are trained to be professional surfers in the operating room, navigating minute-to-minute, life-and-death changes. However, to be successful, we will need to learn new skills and need to change aspects of our culture.

Much of our culture dates from an era of the independent, self-sufficient, autonomous cowboy, where real surgeons did everything. Willy Meyer, well-established breast surgeon, presents the first esophagectomy, for example. We are totally responsible for everyone under our care and on our watch, and we are expected to remember everything that was important, but frankly, there was less to remember: penicillin, intensive care units, and even therapeutic insulin did not yet exist, and chest radiographs had only been in existence for about 20 years. Communication was largely via letters and education was via periodicals and meetings. Patient care involved a maximum of 2 full-time-equivalent employees—a surgeon and maybe a nurse.

But cardiothoracic surgery in 2023 seems more like herding cats on horseback. There is more complexity, more data, and interdependent technology. We can’t control everything and, in fact, <10% of eligible patients get lung cancer screening and about 40% of patients with coronary disease are not receiving the standard of care recommended. Communication is instant via text, VoLTE, and email.

Surgery in 2023 is different. It is complex, technology-based, with more than 60,000 ways for 13 organ systems to fail, more than 4000 procedures, and 6000 drugs. Patients on average see more than 15 full-time-equivalent employees in the hospital. There are multiple surgical specialties and interventional medicine. Information and care are global, virtual, and continuous. Socioeconomic status impacts the ability to even navigate the system. Protocols and guidelines often differ from the patient in the bed in front of you. Wearables, nanodevices, and robots are here. In fact, a robot could be your scrub nurse some day.

However, performing the complex surgical miracles we routinely do today requires that we manage this complexity to keep our patients safe and provide them with the best care available. When AATS was established, a single person could drive and repair a 1918 Touring Model T. The necessary behaviors of success were self-sufficiency, autonomy, and—because no outside help was available—you had to know all aspects of this technology so you could fix it yourself.

But you can’t fix a Formula 1 race car yourself and you can’t easily keep it in your driveway. We need systems and teams and pit crews, where communication is key. Behaviors of success in such complex environments now require discipline, collaboration, teamwork, and the humility to accept that you can’t know everything, about everything, all of the time, anymore. We, and society as a whole, will need to understand this fundamental change in our cultural expectations, and this may be among the hardest changes for us—balancing accountability and responsibility.

Working together as a community, we can see threats earlier, be more agile in our responses, and develop innovative solutions to our most vexing problems. But we need to be the change agents. We know these patients, these diseases, what works and what fails better than anyone! We must engage and lead, since our knowledge can help decrease morbidity, mortality, and increase the likelihood of restoring function or achieving a cure!

“You should never sacrifice what you could be … for what you are.”

—Jordon Peterson

To manage change, we need to understand it. There are 2 kinds of change (Table 2). The first is aligned with your identity. It is generally good, exciting, and easy to accept. It is like herding cattle. It is what we were trained and meant to do. However, this innovation stays within the status quo, so it is typically evolutionary, often incremental, with little resistance to small changes, but it often has less impact to patient care.

The second kind of change is more ominous and threatens one’s identity. It is like being a cat-herder. It is new. It’s not what we were trained to do. It is hard. There is a risk of failure and therefore resistance, termed

<table>
<thead>
<tr>
<th>Differentiating characteristics of the degree of disruptive change</th>
<th>Innovation within the status quo</th>
<th>Innovation that challenges the status quo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in relation to identity</td>
<td>Aligned with current identity “cowboy herding cattle”</td>
<td>Threatens established identity “cowboy herding cats”</td>
</tr>
<tr>
<td>Acceptance</td>
<td>Easy, exciting progress</td>
<td>Hard, resistance, emotional armor</td>
</tr>
<tr>
<td>Risk to individual or group</td>
<td>Minimal</td>
<td>Winners and losers</td>
</tr>
<tr>
<td>Speed of change</td>
<td>Often slow, “generational”</td>
<td>Potentially overnight</td>
</tr>
<tr>
<td>Impact on patient care</td>
<td>Evolutionary, incremental progress</td>
<td>Disruptive, can be revolutionary</td>
</tr>
<tr>
<td>Dangers</td>
<td>“Group think” can feed dogma of status quo</td>
<td>Can require disruptive change in identity</td>
</tr>
</tbody>
</table>

TABLE 2. Two kinds of change based on alignment with identity of status quo
emotional armor.”7 This innovation challenges the status quo but provides new opportunities and personal growth. It is disruptive. There are winners and losers, but it can revolutionize patient care seemingly overnight, but this often requires a change in identity.

Long ago, Michael Porter8 outlined 5 forces that shape health care strategy. Some are under our control and some are not. We can influence 2: new technology and alternative therapies or substitutes. Through our own innovation, we bring the promise of new technology. Through instilling trust and loyalty in patients with cardiac and lung disease, we can become the trusted source to vet any substitutes, even if not our own. Both of these changes are possible.

These forces will impact what we do, how we do it, and why we do what we do. What we can’t afford is to sacrifice what we could be for what we are. We will be obsolete if we define the current landscape only in terms of what we do or how we do it. Remember Blockbuster? They turned down the opportunity to buy Netflix because it was a small niche business. Remember, Polaroid, ToysRUs, and Radio Shack? Remember Kodak, who developed the technology for digital cameras but did not market it because they did not want to lose their important film business (Figure 6)?

So it is critical that we focus on why we do what we do so that we have innovation so radical that the status quo doesn’t exist. Drs Meyer and Meltzer did not wait for anesthesia to solve the problem of thoracic ventilation. John Gibbons knew exactly why he designed a heart-lung machine when he saw a young patient die of a pulmonary embolism. He just did not know what or how the solution would look like when he started. And what made Steve Jobs think that we needed a thousand songs in our pocket? Apparently, we did. They were all able to think differently, completely differently.

So why is Apple so innovative? I must credit Simon Sinek for this insight.9 Most of us know what we do and how we do it. Traditionally, we try to use lots of data and figures to convince people that our solution is best. We make it obvious. So, if Apple just wanted to sell computers they might say, “We make great computers. They are beautifully designed. Simple to use and user-friendly. Want to buy one?” When I need another computer, I will probably check it out. This approach is akin to cardiothoracic surgeons saying, “We do the most robotic lobectomies or the most coronary artery bypass grafts in the world. Come see us.” If I know I need surgery, I will likely come. This initially sounds great, but lots of people can compete on what and how. Data on what and how are easy to show to your advantage and to fake.

But Apple sells computers, TV, watches, phones, and music. Why would we ever buy a TV and music from a computer company? We wouldn’t buy it from IBM or Dell. It is because Apple sells the idea of innovation itself. The most successful endeavors that inspire trust and loyalty explain why. Why says what you believe and why you do what you do, it invites us to join them on a purpose bigger than just a product.

So Apple’s message starts with why and then explains the how and what, so it sounds something more like this:9: “We believe in challenging the status quo in everything we do. We believe in thinking differently. The way we challenge the status quo is by making great products, beautifully designed, simple to use, and user-friendly. Do you believe in owning the best?” It makes you want to check out their product before you even know that you need it.
Willy Meyer inspired us to think differently. He asked why all the time and linked what he did to his purpose and to what he believed. So what if we were to think differently. More about why we do what we do and not define ourselves by the specific approach, incision, or operation. What if we framed our message as: “We believe in finding innovative solutions to improve outcomes and quality of life for all patients with cardiothoracic diseases. We constantly seek the best solution to fix the problem, with excellent outcomes, the shortest recovery, and the least impact to your life. Do you want the longest, best quality life possible?”

We know this is often surgery but we need to also expand our skills to include other options when it is not, be it transcatheter ablations or something new. If we constantly seek the best solution for delivering the longest, best quality life to our patients, would we think of radically different solutions?

By supporting innovation within our ranks and by embracing solutions which help us do our job better, suddenly there is unprecedented technological opportunity to seek the best solution for the patient, be it ablation, immunotherapy, transcatheter valves, or artificial intelligence. Thereby, expanding what we do and helping us choose and administer both new technology and any substitutes that result in the longest, best quality life possible for every patient that we meet. Opportunity only looks like a tragedy depending on where you are sitting. Do we want to be the status quo or change agent?

**STATUS QUO OR CHANGE AGENTS?**

This community has been critically important to our past but will be even more important to our future! How do we innovate and create over the next 100 years? Can we adapt how we lead and act to be more successful in a complex, rapidly changing environment, faced with seemingly intractable challenges, and an insatiable demand for innovation? We will need leaders, courage, and training (Figure 7).

We need bolder, braver leaders. It is not about being fearless. It is about how we behave and what we bring to the crisis. We must dare to seek the truth and face the sometimes brutal facts of the current reality. We must value rather than punish change agents and innovative thinkers and understand that failure has to be a managed risk of innovation. We need deeper, honest conversations about problems that we need to solve both in and out of our specialty.

Leadership is not dependent on a title or position. Rather, leaders are anyone who takes responsibility for finding the potential in people and processes and has the courage to develop that potential. Everyone needs to be a leader, especially in times of change.

Brene Brown’s work has shown us that in the absence of courageous leadership, we avoid tough conversations and develop a nice culture where people talk about people but not to them. If we don’t address fears that occur during a crisis, then we spend time managing behaviors. If we criticize failure or criticize risk-taking, we decrease creativity and increase blame. Our power-through work ethic that worked so well in the past now increases burnout. If we limit innovation, we become irrelevant.

**SUCCESS = COURAGE + COMMUNITY + PURPOSE + ENGAGEMENT**

What is it going to take for us to succeed? Willy Meyer and other leaders have shown us that it is courage, community, purpose, and engagement. We start with courage and embrace the impossible critical problems we face and champion the best solutions for our patients. This requires that we have the courage to accept early failures and other people’s ideas (Figure 8).
Drivers are afraid of rain. Rain amplifies mistakes and...can make your car handle unpredictably. Acknowledge that fear and face the risk of failure. It can take the form of humiliation, financial or reputational loss if you are wrong. But once you understand how the fear is limiting your ability to innovate and you can prepare ... suddenly rain is just rain and you can focus on racing.1

It does not mean there will not be epic failures. Can you see the 3 arms, the 2 hats, and the weird masks in this artificial intelligence-generated operating room picture I did for this talk? But it is still amazing when you think about the other artificial intelligence pictures you likely did not detect. Now more than ever, we must be vigilant in our assessment in the use of new treatments, technologies, systems, and automation, in order to protect our patients and deliver truly excellent care in this new era of a very complex integrated world.

To truly innovate we must embrace mistakes: To paraphrase Robert Bartlett, MD, we must hunt for them, find them, study them, learn from them and make them never, ever occur again. The purpose of any mistake should be to serve as a warning to ourselves and to others. In times of challenge, we must lead. Mistakes must be shared openly as an opportunity for everyone to learn, because if we do this right, a single mistake can educate all of us making us better surgeons, without anyone ever having to make the mistake again.

The fastest way to turning off all innovation is to punish the people who do listen to you and actually try new things ... Don’t kill them with criticism.

—Dr Thomas Zurbuchen, NASA’s Science Directorate10

FIGURE 8. Slide from Dr Colson’s presentation during her address about the need for courage and championing the best solutions.

FIGURE 9. Slide from Dr Colson’s presentation during her address about the importance of community.
No matter how initially crazy it seems, we need to explore organ rehab centers and nanobots, endoluminal surgeries, artificial intelligence, and biomarkers. We need surgeons to lead robust clinical trials and assess long-term outcomes that matter to us and to our patients. In short, we need dreamers and pragmatists in our midst.

Second is community. Since the beginning, we have learned the power of inviting the whole community to the solution. Appreciate the power of people with different perspectives. Look inside and outside of the surgeon community and be open and curious to ideas that are not our own (Figure 9).

To survive, we must look outward at every angle and see every opportunity. Ever wonder why there are so many different kinds of superhero? Because different superpowers are required to detect and thwart different threats. No one can have every superpower. Diversity is more than having a few people that look different in your group. Rather it includes different viewpoints, knowledge, talents, and blind spots that are critical to leverage in both discussions and in making decisions. Together our unique differences can make us more resilient, more likely to see previously invisible opportunities, and the ability to address more threats.

What if you considered every student to have the potential to be a surgeon? Would you see them differently? Be more encouraging? Hire and support them? We don’t know who the surgeons are in the beginning. We must find them and make them.

Next is purpose. Again, from the beginning, we have learned that it is always, always about the patient and those you lead. It is important to avoid placing the patient directly between competitive jerks and their goals. It is also important to remember that the patient’s reported outcomes are
just as important, maybe more important to them, than the outcomes we report to each other (Figure 10).

The importance of patient-reported outcomes was dramatically demonstrated in the debate about functional status after radical mastectomy between William Halsted and Willy Meyer so eloquently detailed by Beatrix Thompson in her recently published thesis.\(^{11}\) Halsted felt that functional status was a matter of little importance compared with the life of the patient. “These patients are old...they are no longer very active members of society.”\(^{11}\) Whereas Meyer was a strong patient advocate, stating that patients were made to frequently move and raise their arm like the Statue of Liberty. The very thing they saw when they came to America to have a better life. They were always able to dress without assistance when they were sent home. He focused on patient dignity, developed a full rehab program, and was involved in cosmesis and breast forms, all while being an excellent technical surgeon and advancing the technical aspects of the operation. Since the beginning, it has always been about the patient for us, and our founders.

Dr Meyer knew the importance of technical excellence. You see: “A car is only as good as its tires.”\(^{1}\) But he also knew the importance of focusing on what the patient valued: “Your car goes where your eyes go.”\(^{1}\)

Lastly, is the importance of engagement. Thoracic surgeons have led in nearly every aspect of medicine and have courageously led from every role. Consensus is just another name for the status quo. Since the beginning, the surgeons of the AATS have brought the field together and helped shape consensus. We need to continue that tradition, now more than ever. Surgeons must be at the table for innovation, care decisions, guidelines, training, and reimbursements. We will have to courageously lead and, as the Congresswomen Shirley Chisholm told us, “If they don’t give you a seat at the table, bring a folding chair” (Figure 11).
As a dreamer and a pragmatist, Willy Meyer built the table and the chair, in order to start the discussion about issues important for thoracic surgery patients. He dreamt of a special society where health care professionals could contribute knowledge to advance thoracic surgery and as a pragmatist, along with the presidents, leaders, and members that followed, he built the AATS as an organization of 1500 cardiothoracic surgeons representing more than 46 countries, with an AATS Foundation that supports more 30 programs in research, training, and education, awarding nearly $2 million to surgeons in more than 60 countries. When faced with challenges, all of you have chosen to lead all around the world.

THE OTHER LEGACY: WOMEN’S MEDICAL COLLEGE OF THE NEW YORK INFIRMARY

Willy Meyer died on February 24, 1932, actually at the New York Academy of Medicine meeting that year, speaking on the benefits of surgery for women with breast cancer, so strong was his passion for his patients. But you likely don’t know his legacy and his role at the Women’s Medical College of the New York Infirmary, an institution built by Elizabeth and Emily Blackwell. They built it to train and employ women physicians because they were banned at nearly every other hospital.

If you search through the archives of the New York Academy of Medicine, which is an interesting adventure I will admit, you will see that between 1886 and 1892, the faculty and instructors at the Women’s Medical College included Drs Elizabeth and Emily Blackwell, Mary Putnam-Jacobi, and Willy Meyer, himself, as the clinical professor of surgery. You see, he was devoted to the cause of women in medicine—both for his patients and for female physicians (Figure 12)!

He also served as a consulting surgeon at the New York Infirmary for Women and Children, treating immigrant patients from nearly every country, because “age, race, creed, or color made no difference to him.” You can see the dramatic increase in the number of women physicians trained in the United States during his time on faculty at these 2 institutions.

At the time of his death, his son Herbert Willy Meyer stated of his father, “He gave a helping hand at all times to women doctors, for whom he held the highest esteem and greatest regard, and aided the cause of women in medicine to the last.” Since the beginning and to the end, Willy Meyer was devoted to his patients and was welcoming to all—patients and physicians alike! Once again in times of challenge, he chose to lead.

So we are here. More than 100 years after Willy Meyer had the vision for a society in which thoracic surgical problems could be thoroughly discussed. We are together, where all are welcome with an even larger community for the next 100 years.

Thank you, Dr Meyer! We all owe you a great debt, along with the presidents, leaders, and people in this audience that have followed. Thank you. Thank you for your vision, your innovation, and your leadership. You have made all the difference to so many people—patients, trainees, and our surgical community as a whole.

And to the dreamers and pragmatists in the audience, we need you! We need your vision to see our destiny. We need your innovation to build our future. We need your leadership to get us there with courage and grace. In short, you will help us build purpose for the next generation. The purpose, we in this generation have had the gift of living so fully.

All of us have had the opportunity to be useful, to be responsible, to be honorable, to be compassionate. Above all, in this time of challenge, remember that you matter, you count, you stand for something, and you have definitely made a difference (Figure 13). Thank you.

Webcast
You can watch a Webcast of this AATS meeting presentation by going to: https://www.aats.org/resources/presidential-address-3.

Conflict of Interest Statement
The author reported no conflicts of interest.

The Art of Racing in the Rain

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