

Surgery, the view from an island[☆]Daniel R. Margulies^{*}*The Department of Surgery, Cedars-Sinai Medical Center, Los Angeles, CA, USA*

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I cannot express to you how honored I am to have been able to serve as your president this past year. I was introduced to the SWSC early on in my career and found it to be a warm and friendly place to meet others in my field, exchange ideas, and learn of different ways to treat and examine surgical problems. I've made friends through the meeting I would not have otherwise and remain grateful to the society.

I'd like to express my appreciation to those who have mentored and helped me along this path, and though there are too many to name all, I show here a few; [This presentation is heavily visual, ... so written communication will hardly substitute, but where possible I will describe the images.]

Shown here are many of my mentors; all past presidents of the society, but for Steve Parks whom I remember fondly for welcoming me into the group when I was presenting here alone and unfamiliar with any members. I will always remember him fondly. Since then, the SWSC has been a surgical home for me and I consider its members like family. A sincere and special thanks to Clay Cothren Burlew for all the help you've provided and for setting the bar high for the efficient and effective functioning of the society. Ken Murayama whom I've know my entire professional career, longer than anyone else in the organization, as we went to medical

school together, has keep me deeply involved with the SWSC. If I don't see him any other time in the year I know we'll at least see each other here. A special thanks to Shanu Kotari, a good friend whom I met through the SWSC, for all your help and the kindest introduction. I'd especially like to thank Gail Tominaga, who fulfilled the role of program chair this year amazingly. She put in many hard hours planning the event, asked for and tolerated all my wild ideas without complaint, and handled setbacks without being fazed. Also, a thanks to all the committees who have helped make this organization successful. I could not have done any of this work without your help. These wonderful friendships are one reason the SWSC is so special to me. Thanks also to the LP group; Nonie who is dearly missed, and to Marjie and Jill who filled in and kept us going amazingly well after Nonie's departure. And a thanks to my amazing colleagues at home who keep the ship afloat while I'm away and who are a pleasure to work with each day.

To my family: I would not be here today without your support and love. My children Zachary and Isaac put up with my long hours not to mention tolerating my jokes, and especially thanks to my lovely wife Jody who never wants her picture taken, who is always smiling and seeing the bright side of life; who has supported me all along this path every step of the way. She raised our two children and kept me sane throughout my career. I would not have been able to do this without you. I love and thank you for all that you do.

Regarding the topic of this address, there are many serious issues facing surgeons currently, not the least of which include the serious ongoing opioid threat, the significant mass violence in the US society we have witnessed of late, the challenges in healthcare finances, challenges in access to healthcare for the disadvantaged, issues surrounding surgical training and many others. On these topics I have very strong opinions but would simply not do them justice in the short time I have here today. We will however have ample opportunity to delve into some of these issues in more depth in the coming days of this meeting. And there are other issues on the horizon we have not even mentioned such as the impending C-5 disc herniation of the entire millennial population [photo of young folk walking with heads bent over spellbound by intently reading their i-phone].

What this talk will touch on will be a bit about myself, a bit about art, and a bit about surfing. Whether they have any connection will be for you to judge. Now, I have been told by members of the SWSC that many have not had an opportunity to

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get to know me personally, and hence I have been strongly encouraged to use this time to assist in this regard. That some folks are unfamiliar with me is not surprising to me as I am, in general, a somewhat private person, not one to openly push my views on others. I have, reluctantly, agreed to speak a bit about my background and, more importantly, perhaps impart some of what I have learned over the years that it took for my hair to turn color sufficiently to now match my gray sweater. I must warn you though, that I have never given such a talk before; virtually all my public speaking has been on scientific topics and not of a personal nature. But I will give it a go. No references, only some personal stories and other thoughts on surgery for your consideration.

Before I begin on correcting Shanu of my actual beginnings, I want to jump ahead to acknowledge a few very important mentors of mine. As Isaac Newton (reportedly) said: “if I have seen further than other it is by standing on the shoulders of giants”. For me, the list of impressive mentors along the way is long but I would like to particularly note and thank Dr (General) Thomas Whelan for his inspiration and teaching. He was the Chairman of the Department of surgery at the University of Hawaii School of Medicine where I did my surgical residency training. I will forever remember his tremendous understanding of surgery and his exemplary model for professionalism. His extensive experience and passion for teaching was truly impressive and was a real inspiration for his expectation of the dedication required to perform the art of surgery. And when I say art, I mean specifically that. I will speak more on art in a bit, but Dr Whelan would admonish any resident who presented that a patient underwent “surgery” for appendicitis, by pointing out that the patient rather underwent an *operation*, as “surgery” refers to an entire discipline, or more accurately, an art. Inherent in any art is a host of components including the study, history, practice, dedication and creative understanding.

There are many who have helped mold my career, but of special note are those shown here: Jon Hiatt who inspired me to lend my surgical training specially towards treat the injured/trauma patient and inspired and encouraged me to take on an academic career. Mike Shabot, a man of amazing talent; Achilles Demetriou and Bruce Gewertz both sequential chairman at Cedars-Sinai which I have made my academic home, and both of whom have been so supportive of me and my career.

So, as for a bit about me: first off, I’m not complicated. I enjoy my work and will get into that more in a bit. I enjoy my family and my dogs. I enjoy growing plants and vegetables. I remain, in fact, to this day, truly amazed and awed by the process of planting and growing herbs, vegetables, fruits. That one can plant a seed and weeks later seeing an edible result never ceases to amaze me. I therefore love to care for my garden, small as it is. My wife tires of me always bringing in food to add to our dinner. But to me the process still promotes wonder. I like to fish [examples shown] and participate in my sport of the decade whether it be triathlons when I was younger, or golfing as I slow down. I enjoy reading and creating my own vitamin D by absorbing photons which have travelled from our closest star, and often perform both activities simultaneously. I have always liked hiking and still do, as these photos will attest.

OK, you may be wondering what the title is about, so to address that:

I was born on the Hawaiian island of Oahu at the end of the decade of the 1950s, the very year in fact that Hawaii became the last state to join the United States. My parents, I conjecture, moved about as far from their home of NY city as was possible while remaining in the US. Here is an early photo of me with my father, my older and younger sisters, our dog, and my older brother. And one with us sitting under an oil color portrait of our family painted by my grandfather.

As the weather on the island was basically always warm and

rarely changed we spent much of our time in the outdoors; year-round. I reveled in the tropical island life. As children, my parents would take us to the ocean frequently. As you can see, there were not many others at the beach then, in fact the island was not very populated at all. We learned of all the island life joys whether it be the local laulau, or as shown here the “shave ice”. We could climb coconut trees and open the coconuts with machetes. We didn’t wear shoes much nor did we have much use for shirts ... And of course we learned to surf. In fact, as a teenager I spent quite a bit of time in the ocean, and from this time began to gain a real understanding, and respect, of the ocean; it’s power and potential, ...in fact, I may have learned many a lesson there which carries over into the art of surgery. Specifically, there will be more on that later.

The 1960s was an interesting time to be young. There was the expansion of rock and roll, the hip or hippy culture, and in Hawaii the real advent of growth of the of surfing as a real sport. Many in my neighborhood would manufacture their own surfboards in their garages, and the smell of resin on fiberglass was ubiquitous. Some of those childhood friends actually became quite famous in the surfing community making a career of it. Nobody asked, as they do now in California, “do you surf”? All kids just did as part of just being on the island at that time.

As I got older I availed myself of the other wonders of these beautiful islands. As I said, I enjoyed hiking. Essentially, over my years there, I explored each of the various Hawaiian Islands in depth. I share but a few of the areas I explored with you here. At the very top of Maui’s volcanic mountain, Haleakala is a crater, which is a most interesting site. Starting at about 10,000 ft. we would hike through here, starting out in a desert like terrain, with exceedingly sparse but nevertheless interestingly adapted flora, such as this blowing Silversword having evolved uniquely in this one spot on earth. As one crosses the base of the crater the terrain changes until at the other end it becomes as lush as a rainforest. Another example of a spot I visited many times is this isolated but lovely beach on the island of Kauai, shown here, called Kalalau valley. It’s a bit of a trek to access as no roads are even remotely close to it. The back of the valley gathers so much rain that it is reported to be the wettest spot on earth. This waterfall actually flows right onto the beach, which is convenient for showering off in fresh water after swimming in the salty ocean water.

Regarding my education; my parents were both academic, my father a professor of American history and my mother taught college English. They became less than impressed with the education I and my siblings were receiving from the local schools so for high school they offered to send me to one of the two better private schools on the island. For this I am grateful. It was an interestingly old school, having been started by the missionaries in 1841 or so, in order that their children would not have to travel back from Hawaii to Boston for schooling.

I had been interested in sports as I mentioned, and became involved in gymnastics, which I have to say took a lot of time, but which, I think taught me discipline relevant to the art of surgery. Participation in any sport I believe benefits a surgeon by the many lessons participation in sports teaches the individual. Not only hard work, and achieving team goals, but also individual self-reliance. It was an odd sport for someone who grew to be nearly 6 feet tall, but I put the effort in and narrowly captured the individual state championship.

One advantage from attending that school was the way it promoted independent or creative thinking. There were many examples of my classmates from that school making new and interesting world contributions; from creating the first dialup internet access company, to being elected the President of the United States ...

Regarding my direction; being strongest in the science and math I was directed to engineering initially and chose to attend Stanford

for my undergraduate degree as that was about as far east as I was willing to head at the time. I majored in mechanical engineering there, and though I didn't end up practicing engineering I was glad to have received that background. Not only did that experience provide me a structured way to analyze problems logically, but attending that school gave me a football team I could route for my entire adult life.

Ultimately, I chose medicine over engineering, and returned to the islands for medical school. Here I met my beautiful and talented wife Jody and she joined me in these continuing hiking adventures. Just after medical school, and before the long hours of my surgical residency could scare her off, Jody and I married. The hiking together continued, even after our children arrived.

In my current various leadership roles, I speak to many surgeons and residents across the country, and although I do see a lot of hope, I also sense a lot of frustration. In the remainder of this I hope to remind you of or rekindle some of the most awesome aspects of what we do as surgeons.

Earlier, I mentioned Dr. Whelan's comments on how surgery is an art. I have thought on this and how art has influenced me as a surgeon. For this influence, I'll mention two of my grandparents. One of my grandfathers was an actual artist. The other a physician. I feel the influences of both make up parts of me. The intersection of art and medicine is also particularly interesting.

Shown here is my grandfather, Joseph Margulies, in his early years and here are but a few of his works. An extremely talented and prolific artist, his influence of art on my life was always present. He created in many medium, oil, water color, etchings, even lithographs. Art aids, I believe, the enjoyment of life and he did enjoy life; music and singing, etc. A few of his works are shown here including faces, water reflections, fisherman ... and of course portraits of our family. My younger sister is also an artist, as is her husband. I believe that everyone has some innate artistic abilities which can be harnessed even if not trained or experienced, by simply appreciating the art around us. If not actual creating workings of art, we have ample opportunity to explore the beauty surrounding us every single day. Here are photographs I've taken of simple everyday sites. One from my home; clouds, plants and water can make the most amazing art! These views taken from my office window show how art can affect one's everyday life and mold one's attitudes. Beauty is all around us. Like Monet's waterlilies, the view from one site is constantly changing in subtle ways; one need only to look with interest and a fresh viewpoint. This leads me to ask of you to recall two ideas.

I ask you first, as surgeons, to try to recall the very first operative case you saw. You might have been a medical student. What was that experience like? If you were like I was, you were awestruck. The operation itself can and should be a thing of beauty, art, if you will. When each move is precise, correct, optimal in brevity and timing, and the dissection proceeds with perfection, the operation becomes, to me, analogous to a work of art. I ask you to remember that awe that you experience the first time and try, now that you are the surgeon and not the student, to recreate that awe in **every case** you perform. That not only results in the most excellent outcomes but helps capture your intense interest.

The other thought I'd like you to ponder is to ask you to reflect on why you chose medicine in the first place. Martin Luther King said: Life's most persistent and urgent question is what are you doing for others? In general, what I have found is that the underlying reason most of you chose medicine was some variation on that theme of trying to make a substantial difference in the lives of others. It's incredibly important to remember this with all the frustrations modern surgery has.

I told you early on I would get back to discussing surfing: Thinking back, my time in the ocean taught me so many useful

lessons that reflect on the art of surgery itself. In the limited time I have I will mention but a few of these lessons.

- 1) First, study what's ahead. Ie, **before** going in the ocean, glean all you can. Water can be tricky with all sorts of currents and dangers, some evident, some hidden. Sometimes the warning signs are obvious, other times the water looks inviting and benign, but harbor hidden dangers. Even a small operation can go wrong. Know as much about the patient and the plan for the operation as possible before going in. Is this perforated peptic ulcer NSAIDS related or a chronic recurring one in a patient on maximal medications? The ulcer may look the same for both, but the operation performed will be altered significantly by knowing the history before you start the case.
- 2) Make a plan. [photo: ... series of large waves] This is where you want to get to; how best to get there? This way [around] is much preferred than heading straight through the waves. Which incision to make? Place your ports for the best advantage. Surfers know the best route instinctively, as should surgeons know the optimal port placement or type and size of the incision in planning a case. Likewise, outline the sequence of dissection prior to starting out.
- 3) Getting out there can be tough. Paddling out takes strength, and perseverance. Residency is like that, it's not going to be easy. But even after residency, these traits remain important. How can you increase these traits? Practice, ie, repetitive conditioning helps tremendously.
- 4) Similarly, stamina is required. Not just arm strength ... When a set of waves come in unexpectedly twice as the size of prior waves (yes, this happens), you must dive under the turmoil, holding your breath until it seems like your lungs will burst. There will be times when stamina is essential, when you have done 4 cases in a row, no one around to assist and yet the patient needs your help. Not to dissuade you for asking for help (we'll get to that in number 10), but sometimes one just has to do what's required.
- 5) Learn to use patience when appropriate. Unlike in the movies, once you have paddled out past where the waves are breaking, you actually have to ... wait. Sometimes for a long time. Sets of acceptable waves may take quite a while. In treating a bowel obstruction that you know will resolve, patience goes a long way. Going in at the wrong time just to get the problem over with can lead to unnecessary complications. This may be difficult to fully explain but your patients with benefit.
- 6) Communication. What do you do when you get out to the right spot, and begin to wait? There is time to chat with the others in the water also waiting. In Hawaii, no one is ever in a rush. And so, while waiting, each on his own board, the surfers chat, the local term for this is "talk story". We in surgery, on the other hand, seem always to be in rush, with all the demands put on us from charting, to rounding, to operating, to clinic, etc. From the patient's perspective, though, to make just a bit of time to sit and talk goes a long way. When the patient sees you rush in speak a few words and leave, he or she gets the feeling you don't care. This may be the furthest from the truth but is what gets conveyed. Perhaps sit down, if just for a bit, ask a bit about the actual person whom the patient is, and slow down. Those moments and those words will be noticed.
- 7) Make a call. You see a wave coming, you start paddling to get speed up, the wave raises you up and you're looking down the face of the wave ... at this point you must either back out, or go full speed down the face. If you do neither you are

- thrown over the top (going over the falls—not pretty), and worse than doing either of the other options. So you make the call. Similarly, sometimes you don't have all the info you want but it's important to simply make a decision. The hypotensive patient with blunt abdominal trauma needs an operation most likely, not a CT scan, as radiation rarely stops bleeding. Delaying worsens things. Make the call, decide what is most important to do first, and do it.
- 8) Recognize when to stop. [photo: surfer diving from his board just before plowing into a pylon] This fellow got off his board just in time. This is the damage control option which is an option you need to think about. Remember it when continuing might lead you into worse trouble. An exit strategy provides the opportunity to recover, reassess and return.
 - 9) Every decision matters. When you find yourself rushing to make an uninformed decision, slow down: it matters. I often share reading suggestions from my boys and this science fiction book [Dark Matter] describes a process of how each and every decision one makes alters or effects one's entire future. In this story each decision point creates a parallel universe which has it's own trajectory. Do you catch this wave or wait for the next? When you're inside the breaks you don't know what's coming beyond it. So choose carefully. This may seem at odds with lesson number 7, but it's not. Don't let the weight of decisions paralyze you but be thoughtful about each decision that can and will affect others. Sometimes when you are most in a hurry is when you need to just slow down, weight the facts, and choose carefully.
 - 10) No matter how good you are, sometimes you need help. Once I was at Waimea bay bodysurfing. Suddenly, a huge set came in. Everyone, myself included, was swept pretty far out. I kept swimming but was tiring. Helicopters came and started plucking folks out of the water. I was assisted out of the current by grabbing on to a 20-foot lifeguard surfboard. Once out of the current he told me to swim back in. I just needed that boost to get out of the current. When you are in trouble, don't persist at it yourself to your detriment, but stop and recognize things aren't so great and consciously ask for some help. Know that everyone makes mistakes and that not calling can compound an error. If you are concerned about having injured the patient, call someone to objectively help figure it out. Calling for assistance is not a failure, but the right thing for your patient.
 - 11) Civility. Likely as not where the waves are good there are bound to be a group all vying for the same wave, maybe even the same spot on the wave. This can lead to some pretty awful behavior. Rather than bullying your way in over others using an orderly respectful approach goes a long way. On this topic I could expound, but for brevity: I think civility and respect for our patients, our staff, and our colleagues is of utmost importance.
 - 12) Failure is part of the learning process. [photo: surfer wiping out badly] Do enough cases and you will have a case at mortality and morbidity conference. Learn from your failure, don't be destroyed by it. (reference number 10 again).
 - 13) Have fun. Don't forget about humor. Clearly capturing the power of the wave and flying through the water with no engine but the power of the water itself is invigorating and tons of fun. So too is the art we practice. All the serious implications and consequences of our work can be daunting. But don't forget to have fun! Kids all know how do have fun. Why do adults sometimes lose that? I have made the case that operating is an art and creating art is enjoyable. So enjoy it! My kids know I can find humor in even the most mundane of things, such as a street sign.
 - 14) Integrity In surfing cutting someone off is just not right. Along with civility to others (number 11), what I have learned it that when faced with difficult situations, just ask yourself what the right thing is to do for your patient. Not what is easy. This may mean personal sacrifice. You just spent a long case and made an anastomosis which your not sure about, and though it might be OK, know that you will likely spend more time worrying about it than if you just redid it to be perfect before leaving. I tell my residents: just do the right thing. In general, if you simply pause and ask yourself what the right thing is, you will know the correct answer.
 - 15) Family. This sport of surfing is a family thing, not something one does alone. Here you see moms and dads teaching their kids. If the whole family is not all out there in the water, likely there's someone who cares waiting and watching from shore. None of us could make it through what we do in surgery without family support. Make time for this most important part of your life.
- In summary, I've tried to highlight the art and beauty inherent in our work; and remind you to stay amazed; not only appreciate the wonders around us but also allow yourself the opportunity to wonder. Of the lessons from surfing, I believe it safe to say no other prior presidential address has compared surfing to surgery (nor is one likely to in the future), but the topic, if nothing else, can affirm to you my affinity for humor. Yet, there is seriousness mixed in, and of all the lessons described today I believe the most important are the last three: civility, integrity and family.
- I cannot express enough my appreciation to all of you. Thank you.