

Canadian Anesthesiologists' Society – Oral Histories

Dr. Hilary Grocott, interviewed by Archives & Artifacts Committee Chair Dr. Mike Wong

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Dr. Hilary Grocott served as Editor-in-Chief of the *Canadian Journal of Anesthesia (CJA)* from 2014 until 2020. He is Professor and Head in the Department of Anesthesiology, Pharmacology, and Therapeutics at the University of British Columbia. Dr. Grocott completed medical school at the University of Saskatchewan and later trained in anesthesia at the University of Manitoba, then completed cardiothoracic anesthesia and research fellowships at Duke University. He has published more than 450 peer-reviewed articles, abstracts, and book chapters about a diverse range of research interests.



**Archives
& Artifacts
Committee**



Mike

It's a pleasure to talk with you today. Let's get started.

Hilary

I'm happy to be here.

Mike

Starting from the beginning, can you tell us a little bit about your family and childhood?

Hilary

I grew up in Saskatchewan. I was born in Regina and both my parents were immigrants to Canada. My father is from the UK [United Kingdom], my mother was from the US [United States of America]. They were both pediatricians. They came to Canada in the '60s and I was born shortly thereafter.

[Growing up] I guess I could say there was pediatrics everywhere. Medicine was in the background of most of life, actually. It's crazy when you think about it. I remember, long before the days of pagers and cell phones, the phone going off at home at all hours. As I got older, I'd pick up the phone every once in a while, and there'd be some nervous intern on the other line, telling me what the electrolytes were so I could convey them to my parents. I remember thinking as a kid, I don't know what kind of "lights" those are, but they must be awfully special because they're calling about them day and night!

Anyway, I just grew up on the prairies and medicine was part of the vernacular of life. When I think about my kitchen table at home, it had stacks of *New England Journal's [of Medicine; NEJM]*, *Lancets*, and other medical journals that were a part of normal life at home. It's kind of funny, I guess. I was kind of born into [reading journals]. That's where it came from! I spent my first 18 formative years in Regina.

Mike

Just steeped in medicine! Was there much pressure from your folks to go into that career?

Hilary

In high school, there were two diametrically opposed opinions in my household. I actually was a fairly accomplished amateur trombonist. I played in the local symphony orchestra and continued to do so in medical school. In high school, I fancied myself being a future symphonic trombonist. It seems kind of geeky that both me and my friends spent our time playing in orchestras. Our superheroes weren't Marvel comic characters or rock stars; they were like Herbert von Karajan, Seiji Ozawa, some of the world-famous conductors of symphony orchestras. We knew their names, we knew the players in the orchestras. I was really going to go into music, which I have to say was heavily supported by my father. My mother had completely different ideas, though. She was like, "You can't be a musician. There's no security in that." I have to admit, I was kind of upset at the time but, looking back now, she was right.

It was just sort of a natural thing. If I wasn't going to be a professional musician, the only other life I really knew was medicine. I wouldn't say there was direct pressure, but I would say because there were no other obvious alternatives, that's kind of where I fell to. I'm forever thankful for it.

Mike

It seemed like a natural way to go.

Hilary

It seemed like a natural way to go. I will say, as a teenager, I remember my father had to go into the hospital for an outpatient procedure, having an angiogram and a femoral angioplasty. I went to see him. I was used to going into the hospital and that time, when we were walking onto the ward, I just had this sense. "Oh wow, I really feel like I belong here, like this is where I want to be." [The feeling] originated from when I was a younger child, as both my parents were working in the hospital all the time. This was long before the days of organized daycare. When school was out in the summertime, we would go to the hospital with them. They'd park us in the interns' and residents' lounge, and we would just hang out there all day until they were finished rounding in the evening and we'd all go home.

I feel like I kind of grew up in a hospital. I remembered that later in life when I was visiting with my father. Again, I went, "Wow, I really feel like this is where I belong." It was a feeling that I needed to be [in the hospital].

Mike

I think many of us still continue to rear our children in similar ways today what with being on call, working weekends, that sort of thing.

Hilary

Exactly.

Mike

Did you keep up on playing trombone recreationally?

Hilary

Actually, when I moved to Vancouver two years ago, I had a whole array of instruments, including trombones. I recently made the decision to sell them all. I had had them for all those decades.

Quite honestly, once I got further into medical school, I found that [I just could not find] the time I needed to practice my playing in order to keep the level that I was satisfied with. It sounds kinda crazy, but I actually quit playing cold turkey almost 40 years ago. I never picked up the instrument again. I just sold them last year.

But I think about it all the time. I listen to trombone music, I kind of know who some of the current players are around the world, and I follow it from afar. But I'm not involved as a player anymore.

Mike

Sometimes it's easier to make that kind of clean separation.

Hilary

Yeah, it's interesting. Going back to the journals and things like that, when I was in high school, I was a subscriber to what was known as the International Trombone Association [ITA]. Trombonists had their own journal! Seems kind of crazy that they'd have a journal for that. I had let that subscription go decades

ago. Maybe about 15 or 20 years ago, I was invited as a visiting professor at McMaster to give a talk. Dr. Norm Buckley was the chair at that time. I knew he was a trombone player and he knew I was a trombone player. I remember the gift he gave me for giving that lecture was renewing my subscription to the ITA journal! I'll never forget that. It was such a great sort of way to rekindle some memories.

I just saw Norm the other day and we talked about it. These things [in life] are kind of circular and come to revisit you again sometimes.

Mike

It provides a nice segue as well. Speaking of anesthesia, how did that and cardiac anesthesia come into your life?

Hilary

I remember very distinctly as a medical student, I used to find the operating room environment incredibly intimidating. My first time there, I was standing in the background and they were waking a patient up. Honestly, it looked horrible! This patient was coughing and bucking. It was that kind of chaotic, non-smooth awakening that happens sometimes. I thought that it looked so uncomfortable and difficult. I went, "I think I need to do that." I was actually physically uncomfortable [watching it] and I thought [doing better] was a challenge I might be able to sink my teeth into.

Maybe a year later, I was doing a summer shadowing experience on a surgery rotation, following some surgeons around. [One day] our case got canceled. I'll never forget the day because Dr. Mark Cherry was an anesthesiologist at the Regina General Hospital, where I was doing this summer rotation. He saw that the case was canceled. It was a casual environment, and he was a guy who used to live in our neighborhood when I was growing up. He said, "Hey, why don't you come and see what I'm doing today?"

I can tell you, when we walked into that operating room and I saw Mark work, and it was like a light switch went on. I just thought, "This is what I'm gonna do." I was so relieved because I loved so many things in medical school and all of a sudden nothing else mattered – I had made the decision! In fact, it seemed to have been almost made for me. Anesthesia was what I was going to do.

Choosing cardiac anesthesia was a complex thing. I was particularly interested in neuroanesthesia [and I thought] I was actually going to be a neuroanesthesiologist. I was really interested in the brain. But, as I came to the end of my residency, there was some really interesting work being done in cardiac – particularly in the area of brain injury and neurocognitive dysfunction. It was a really growing, hot topic. When I got to my cardiac rotations, I suddenly found that I could marry my interest in the brain with that incredibly vibrant and growing field of cardiac anesthesia. [Subsequently] in my cardiac anesthesia work – my research and academic pursuits surrounding the cerebral consequences of cardiac bypass – I was able to marry those two different disciplines. That's really how I started my career in cardiac anesthesia.

Mike

Any recollections about your mentors [while training]? Particularly as you became immersed in research?

Hilary

Mentorship is an interesting thing. I used to think, very early on in my career, that you needed a mentor and that mentor needed to be your mentor throughout your life, throughout your career. But what I've come to learn is that we all need different mentors at different times in our lives, sometimes for different areas of interest.

When I think about my early start in research, it was actually as a resident. Dr. Alan Mutch was a neuroanesthesiologist in Winnipeg and I spent six months working in his large animal lab. We [looked at] aortic surgery and spinal cord ischemia, which is where I published some of my first work. My clinical mentor was Dr. Laurence Brownell at St. Boniface Hospital, just the epitome of the expert clinician.

Then, when I moved to Duke as a fellow, I got exposed to a whole other level and depth of mentorship and expertise. Dr. Jerry Reves was Chair of the department at the time, and we're still friends today – I just saw him a few months ago. Also, Dr. Mark Newman, who was my Division Chief in cardiac anesthesia. They really became my clinical mentors and also introduced me to a real hardcore academic career and life. [They showed] how you could marry both clinical expertise with research and really build an amazingly vibrant career. I really give them so much credit.

When I was there, I did considerable research time. Dr. David Warner was a neuroanesthesiologist and I spent time in his lab before starting my own lab at Duke. Sadly, he died a couple of years ago from glioblastoma. He taught me so many lessons in research and also introduced me to peer review, for which I'll be forever grateful.

Mentorship changes [over time], as I said. When I moved back to Canada, I was recruited to the University of Manitoba by Dr. Eric Jacobsohn, who was the new Chair there. Eric had been a senior resident when I was a junior resident. When I moved back to Manitoba, he too became a mentor to me in both cardiac anesthesia, critical care, and in medical administration.

It's amazing how you have these different touchpoints and people throughout your career that provide you with guidance and examples of success. So, I have a very fluid idea about mentorship, how careers evolve, and how they get started.

Mike

Throughout your career, you have been involved in a broad swath of research from perioperative outcomes to more lab-focused studies and work on biomarkers. Did you know early on what themes and topics you wanted to focus on and explore throughout your career, or did some of these projects come up incidentally?

Hilary

[I sometimes think of] research interests as an iterative process. You have to be open-minded and kind of have a direction. There are a number of decision points in one's career where you can go down any number of different pathways. My research began in Dr. Alan Mutch's lab, where we were looking at spinal cord ischemia during thoracic aortic surgery. Yesterday, in fact, I just had a paper accepted to *Anesthesiology* on spinal cord injury in thoracic aortic work. It partly represents almost 35 years of work; I started there and I'm continuing to do that kind of work! The neurologic complications were where I really got started.

But research is like a complex Venn diagram, so there's always different overlap. When I looked at brain injury for example, we were trying to find at different ways to diagnose that, which led me into biomarkers. Also, we were trying to understand some of the factors influencing cardiopulmonary bypass; some of those we couldn't study in humans, so we developed a small animal model to study that. One of those influences was hemoglobin, and there was a period of time when blood substitutes were really big, so we did some work with perfluorocarbons and hemoglobin substitutes. It led me to some work on transfusion and that tied in well when I was a co-author with Dr. David Mazer in the TRICS [Transfusion Requirements in Cardiac Surgery] trial, [examining] liberal versus restrictive transfusion strategies. That continued on with developing the overall field of patient outcomes and optimizing those outcomes. There's lots of different areas where it all overlaps. Still, central to all of that – even though I had arguably

too many different research interests – [was] the brain. Brain monitoring and spinal cord monitoring have really been some of those mainstays throughout my work.

Mike

During your research, you started on one side of the peer review process and eventually ended up heavily involved in the other end. Can you describe how your work shifted into peer reviewing and editing for journals like the *Canadian Journal of Anesthesia*, and eventually becoming Editor-in-Chief?

Hilary

Sure. As you rightly pointed out, I was doing a lot of writing – clearly, one side of that publishing process. I got into peer review early when I was a senior fellow, and David Warner was the Associate Editor of *Anesthesia & Analgesia* – he got me into peer review. He gave me some manuscripts to review, and then he would review my reviews and mentor me on what I should look for. I still remember the first manuscript he gave me; it was actually a paper by Dr. Ted Eger, who at the time was making remarkable discoveries into new volatile anesthetics. I thought, “Oh my God, how am I supposed to peer review a paper by this giant of anesthesia?” David walked me through it. As I did my own writing, I started getting invitations from other journals to peer review, and I became more and more interested in that.

When I moved back to Canada, Eric suggested to Dr. Don Miller, who was the Editor-in-Chief of the *Canadian Journal of Anesthesia* at the time, that I might be a good Editorial Board member for the journal. I started taking a little more ownership in peer review. I got onto several other journal editorial boards and really liked the process – the process of refining those diamonds in the rough, if you will – helping those authors mold their work into something that is clearly written and has a strong scientific message. I really enjoyed that part of writing, and it helped my own medical writing. I think every author struggles with optimizing the efficiency of their writing, optimizing the clarity of thought and clarity of message. I really enjoyed that part of it.

I had an informal writing mentor when I was at Duke – Dr. George Gopen. He was a Professor of in the English department and would put on these regular seminar series about medical writing. I remember he said, “If a grant reviewer is reading your grant or if a peer reviewer is reading your paper and they can't understand it, that's not their fault. That's the fault of the writer.” He really taught me how to write with the reader in mind. I've always taken that philosophy into my own peer reviewing.

Once I was on the board of the *Canadian Journal of Anesthesia* for a while, Don Miller was coming up towards the end of his term. I remember a call went out to strike a search committee for the new Editor-in-Chief. I wanted to be involved in that, so I emailed [him]. I thought that would be really interesting. And Don said, “You can't be on the search committee, because you need to apply for this job.” Quite honestly, I hadn't even thought about it before. It just wasn't on my radar. But I thought, “Well, I do a lot of writing and reviewing, and I'm doing more and more of it. Maybe this might be interesting.” That basically led to the search process. After a couple of interviews, the job was offered to me. Honestly, it just opened up a world that I thought I had a toe in but, until I dove in with both feet, I had no idea just how fascinating, how complex, and how interesting it was. It was easily, to that point, professionally one of the most satisfying things I had ever done. It just opened up a whole new world. It was amazing.

It did, though, require compromise in many areas, including personal compromise. I still remember my final interview in Toronto. Dr. [Patricia] Trish Houston, who was the president of the CAS at the time, asked me during my search interview, “Okay, Hilary, if you do this job, what are you going to give up?” Honestly, it floored me. Why hadn't I thought about that before? You can't add this to your portfolio without stealing time away from something else. I made the decision right on the spot that even though I'd had almost 20 years of really fruitful research under my belt, I was going to have to let some of that go in order to really make it work.

[Even today] whenever I think about a potential career change, I always think, “You know, I can't just add this [commitment]; I'm going to have to give something up first.” I think that approach helps one to at least attempt to find some balance in their life. I'm not the poster child of that, I can tell you that! But I do think about it all the time.

Mike

That's a very astute question on her part. It must have been challenging [to take that on.] [How was working with] Don Miller – was he very active when you were first starting as Editor-in-Chief and learning the new role?

Hilary

Don is such a kind, respectful, exceptionally qualified, and thoughtful leader. I was always impressed by how he could manage an Editorial Board meeting. It was just amazing. Being Editor-in-Chief has an incredibly steep learning curve. You have to learn a lot in a very short period of time, and I was very grateful to have that kind of mentorship from Don. I just remember the number of phone calls and emails in those early months. Everything was so new. Over time, I needed fewer and fewer of those, and eventually you're on your own. But that transition was so important and he was really instrumental in making that transition from his editorial leadership to mine as smooth as it could be.

Mike

What kind of challenges faced the journal when you started? What challenged you personally?

Hilary

Personally, I was trying to be very conservative in my estimations of how much time managing the Journal was going to take. I knew it would take a lot of time. I thought I had better estimate it would take *even more* than I thought. However, I had no idea it was going to take *far more* than that. You couldn't overestimate just the amount of time and effort it was going to take. Finding the space and extra time to do that work was a really big personal challenge for me. I'm extremely grateful for my kids who were growing up at the time, and my wife, for giving me that opportunity. It did take considerable time away from them. That is something I would probably try to do differently if I ever did it again.

In fact, I was interviewing for a similar position [more recently], thinking about dipping my toes into the Editor-in-Chief role again with one of the other very well-known journals. I remember my kids, who are now finished university and beyond, saying, “Dad, do you *really* want to do this again?” I [recalled] that was such a difficult time. I realized what an impression it must have made on them. I ended up not taking the other editorial job.

[As for] other challenges related to the journal, journals are evolving organizations and structures. We actually had some substantial budget challenges that weren't even on my radar when I was considering the [job](#). When I was thinking about taking on the journal, I did not take a deep dive into the journal's evolving finances. That was a learning curve, understanding how to balance a very complex budget. In the publishing field, this was at a time when we were starting to really understand issues of fraudulent publication. It was the time when Drs. Joachim Boldt and Yoshitaka Fujii were publishing some very fraudulent material. Retractions were just growing and the lack of integrity [was being increasingly recognized].

The Editorial Board itself, it was also a very important time [for that]. We were coming to the realization that equity and inclusion were lacking from the journal, and from a lot of what we were doing in science and medicine. That was a challenge in itself.

Obviously, one of the biggest challenges I had to face later in the term was COVID-19, and that just put peer review and editorial work on steroids. It was a 24/7 operation. I mean, it was crazy busy in the operating room and in the ICU, but the journal had to get this science out as quickly as possible. We changed our policies with COVID papers. Usually, our time to first decision was about two weeks, and we had worked hard to get [there]. I made a pact with the Editorial Board that for COVID papers we would turn these papers around in 48 hours. That was it. It meant I got home from a long day in the ICU, and we worked on these papers because decisions had to be made that day. I had preselected peer reviewers who agreed that they would get their reviews done in 24 hours, and we got it all back to the authors in 48 hours. It was crazy. When I took on the journal, we had 675 submissions in my first year. During COVID, we had 1,400 submissions a year. We did not expand the Editorial Board.

Gratitude is something I've really grown to appreciate, and I have immense gratitude for the Editorial Board for stepping up during that incredibly challenging time.

Mike

It sounds like quite a handful. In retrospect, how do you think you fared in light of these challenges and what kind of legacy you left on the journal?

Hilary

I think that the *Canadian Journal of Anesthesia* was at the forefront of anesthesiology and critical care during COVID. We published the very first review article on COVID-19. In fact, it wasn't even called COVID-19; it was SARS-CoV-2.

I still remember vacationing in Saint Kitts in the Caribbean. It was the first week of January, and I remember following my Twitter feed a little bit, going, "Hmm, this is interesting. I'm seeing just a whole bunch of stuff about this new virus in Wuhan. This is interesting." I got Drs. Phil Jones and Greg Bryson on the phone right away. I was standing on the beach, talking to them on the phone. I said, "Guys, I'm hearing this is going to be big. We've got to get something out right away from the journal." We talked for 15 minutes, identified an author who wrote one of the first original SARS papers, called them up out of the blue, and said, "Look, we need a paper on this, and we need it in 10 days." We worked hard. On February 17th, long before it became known as COVID-19, we published the first review article. That became the source that was referenced and [it was] cited over 600 times. I'm really proud that the journal was first, even in that global pandemic. People came to the journal for that. It built a reputation, it continued to build submissions and the international reach of the journal grew. Our downloads went into the millions per year, and I think that really helped the journal a lot.

When I think about legacy things, building that reputation for the journal was important. It wasn't just about COVID, though. It was putting the right people on the Editorial Board and getting good quality reviews, increasing the quality of the journal, increasing its international readership, making major strides in equity, diversity, and inclusion [EDI], adding strong women's voices to the Editorial board, involving the Canadian Critical Care Society – being their journal, adding critical care to the [CJA] again.

These are ongoing legacies that myself and the senior editorial team were able to bring to the journal that have maintained it today. I know that Impact Factor always comes up when one talks about journals. We did build the Impact Factor of the journal – as dirty a metric as that is. As an Editor-in-Chief, you come to realize that it's an imperfect metric but, if you dismiss it, it's at the peril of the journal. It still holds so much sway at the levels of universities and authors that you can't ignore it. In fact, we used to say that Editors-in-Chief generally hate the Impact Factor, but secretly they hate that they have to love it. We built that Impact Factor from 2.1 to 6.7, and that's an accomplishment that I give credit to the whole team for.

Mike

That's huge. What other aspects define success for a journal to you?

Hilary

The feedback I continue to receive – no matter where I travel in the world – [when I] talk to other people in our specialty, they talk about the quality they see in the journal. That's not quality from Impact Factor; that's quality in the authors that we've been able to attract, the clearly written papers that we've been able to publish. I think that's also responsible for the huge number of downloads that we've seen. Adding important voices to the journal and being an example of making EDI a priority – I get that feedback from people around the world. I think those are important things as well. There's no question about it. The Impact Factor is definitely there, but all those other intangibles sometimes point to the success of a journal.

Mike

During your term as Editor-in-Chief, probably more had changed in academic publishing than in the almost 30 years Dr. Rod Gordon served when the journal started. What do you think about continuing and emerging challenges in academic publishing, such as honesty in publishing and now generative artificial intelligence [AI]? How do you think the *CJA* and the academic publishing world will handle that moving forward?

Hilary

There are some challenges, no question about it. The integrity of science is always under attack. I think that's the main thing I will say. The reproducibility of science is also a real problem that we have. One of the other challenges that journals have right now, and science in general, is that there's just been an explosion of journals out there. There's arguably an explosion of low-quality and sometimes predatory journals. I do worry that this is leading to a systematic dilution of science. One could argue that it doesn't really matter what the paper is, how accurate it is, or how well or poorly written it is. Everything is going to get published in some journal at some point. Once it's published, someone is going to cite it, and it just becomes a downward spiral – a dilutional threat to the integrity of science. I do worry about the expansion of all these [low-quality] journals. It's going to be a continued problem. How do you deal with that? You have to focus on maintaining your own quality and building that reputation so people know the metric they really have is the strong reputation of the journal that supports the integrity of science.

You mentioned generative technology, such as ChatGPT. We're already seeing that as a problem in the publishing world. ChatGPT is already listed as an author on a bunch of published papers. Writers are using generative AI to write their papers. We know that reviewers are using generative AI to do the peer reviewing. I don't know what the answer is, but I think it really comes down to having a strong peer review team with content experts who are at the forefront of the science that's being submitted. You still need that human arbiter to maintain the integrity of science. Those threats are always going to be there, and we've got to get better and better at figuring out whether it has been influenced by something like ChatGPT. But as good as we get at detecting that, these generative technologies will get better at fooling those safeguards.

Mike

We have to master the fundamentals, ensure that good designs and thoroughness are rewarded.

Hilary

100%.

Mike

With the editorship behind you, what do things look like for you now?

Hilary

I've always prided myself in focusing on and putting even more energy into being the best clinician I can be. In recent years, particularly with the move to the West Coast, I've actually upped my clinical game. It's amazing how you can still learn so much as a clinician. I've learned more in the last year than I have in the last 10 years. I'm so grateful to the colleagues I have around me. I do a little more clinical work these days, but that might change in a bit.

I'm probably going to take a few more roads into medical administration coming up. But balance is key. I'm still involved, more secondarily, as a mentor to other writers and within a research team, producing new scientific material and publishing. I'm not the PI [primary investigator] anymore; I don't have that time. It's not my focus to be writing grants anymore. I'm still a clinical educator, speaking around the world on topics where I have expertise. I'm still doing that. That's coming down a little bit, thankfully. I'm trying to travel a little bit less these days. But clinical medicine will always be at the forefront of what I do, no matter what: in research, administration, or my work in the hospital.

Mike

One more retrospective question before we wrap up: If you had a chance to talk to a young Hilary during residency, what advice would you give him for the future, and what might he find most surprising later in his career?

Hilary

I will say that one thing I struggled with my entire academic career and in research was maintaining focus. I think I could have accomplished more had I narrowed my field even more and really honed in on a few specific areas. Research is so infectiously exciting. I don't know, maybe it's latent ADHD [attention deficit hyperactivity disorder] or something like that. The drive to go on to the next shiny thing, that's always been a challenge for me. I would tell young investigators now, "Maintain your focus. Don't get distracted by that next shiny thing. Stay on track. Become the expert in this field. If that's where your interest is, where your joy is found, try to maintain your focus." I think that's something I always had to regroup and refocus on because I would get a little bit unfocused in some of my research.

The other thing I will say, though, is keeping an open mind. John Maynard Keynes, the economist in the 1930s always said, "When the facts change, I change my mind." I think one of the problems with researchers is that you can get so focused on something that you put blinders on and only see it through one lens. One thing I've really tried to maintain throughout my research and academic career is an open mind. When the data are pointing you in a different direction, don't try to bring that direction back to where you think it should be. Go in the new direction.

Mike

Excellent advice for everyone. Thank you again for your time.

Hilary

It's a pleasure.