

Perspectives in Veterinary Medicine

Learning Canine Surgery from Vivien Thomas

By Dr. Donald F. Smith

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I have written previously about Vivien Thomas, the African-American surgical technician employed at Johns Hopkins Medical School by surgeon Alfred Blalock.¹ Thomas, made famous in the HBO documentary “Something the Lord Hath Made,”² was not just a legendary surgical technician, but also possessed a creative mind with the rare ability to develop and perfect intricate surgical procedures to solve complex human cardiovascular problems.

Though Thomas (1910–1985) is best known for—with Blalock and the pediatric cardiologist, Helen Taussig—the procedure to correct Tetralogy of Fallot in the early 1940s, at least one veterinarian also knew him as teacher, mentor, and friend.

Dr. Harold Burton entered the University of Pennsylvania’s School of Veterinary Medicine in the first accelerated class during World War II. Taking four years of academic work without summer breaks, he graduated in 1943 instead of 1944.³

Following graduation Burton worked for the Coast Guard Reserve, patrolling up and down the Maryland-Delaware coast looking for evidence of German U-boat activity, which caused widespread damage to US ships and merchant vessels during the war.⁴

After the war ended he took a faculty position at the University of Maryland College Park, but left after two years because they “didn’t want me to work very hard.”⁵ After gaining some equine experience at Hagyard and Hagyard⁶ in Lexington, Kentucky, he returned home to Maryland and opened an equine-oriented general practice.

For financial and logistical reasons—most notably the long driving times between equine calls—Burton gradually morphed the practice into small animal and dairy, and eventually into strictly small animal. The transition was complete when he purchased the Towson Veterinary Clinic in 1949.^{7,8}

With Towson becoming the bedroom community for Johns Hopkins University, some of the faculty and physicians became his clients. One of his more famous client families was Dr. Blalock and his wife. In the course of their veterinarian-client relationship, Burton became aware of the cardiovascular work of the Thomas and the Blalock research team and visited the laboratory often, as Thomas reported in his autobiography.⁹

...Dr. Burton visited the laboratory frequently, observing operative procedures being performed by me and by others. He was interested in learning to perform surgery to a greater extent than had been taught in his veterinary school. He negotiated with us about the possibility of taking our course in operative (dog) surgery and was allowed by Dr. Hanlon to fill fourth place on a team of three medical students.

Through conversations with Dr. Blalock, and later during his trips to the laboratory, Burton became aware of the mortality problems the Blalock team was having with the Beagle colony used for developing pediatric surgical procedures and instructing surgical residents. “Their problems were all management-related,” Burton told me, “and we got that sorted out very easily, so mortality decreased.”¹⁰

Burton and Thomas became “great friends” and Thomas became an invaluable partner in developing better operative procedures for the veterinary hospital. He built a closed anesthetic system for Burton, using endotracheal tubes to deliver oxygen and anesthetic gases (similar to the one he used for his dog experiments), allowing the practice to advance from an open ether system. “It improved my success a great deal and allowed me to work in the chest cavity,” Burton reported with satisfaction. This working relationship with Thomas continued for about 15 years.¹¹

When Burton had a difficult surgical challenge in his practice, he would invite Thomas to come over to his hospital and teach him how to do it.¹²

He spent many evenings with me. When I had something that was difficult, I would call him. We worked sometimes to 1:00 or 2:00 in the morning. I’d say, “Come over at 7:00,” and he’d be there by 6:00, ready to go. He just made everything so simple.

I asked Dr. Burton to share an example of their collaborative efforts:

One day, I had a huge St. Bernard—I mean huge—that had been hit by a truck. The diaphragm had torn loose and the animal was blue, just about gone. I promptly put him on the machine [the ventilator] and called Vivien. He came right over and we opened up that rascal’s chest and we both sutured up the huge hole in the diaphragm.

The dog made it and the people were overjoyed. When I was ready to send him home after three or four days, the owner inquired about the bill. I didn’t know what to charge, but told him the surgery was a big deal. “Would \$300 be too much?” I asked him. Without a moment’s hesitation, the guy pulled a wad of money out of his pocket and peeled off three bills.

I always gave Vivien what the client paid me for the surgery, so when Vivien came in the next day and I gave him the \$300, he almost fell on the floor. They paid him

*next to nothing at Hopkins, and there were weeks and months when he made more from me than them.*¹³

Thomas's autobiography corroborates Burton's claim that many times the fees he passed on to Thomas were greater than what he earned at Hopkins. "I found this type of moonlighting quite profitable, as the fees charged by Burton usually exceeded a week's pay in the laboratory."¹⁴

Another topic that was of great interest to me was the reference Thomas made in his book to his moonlighting activities coming under scrutiny by the Maryland Veterinary Medical Association (MVMA). Apparently it was not just Dr. Burton's clients' animals which were operated upon, but Thomas also became what he referred to as the "resident surgeon" to the pets of numerous members of the Hopkins faculty and staff.¹⁵

"Oh yes, that happened." Burton told me gleefully during my first interview with him.¹⁶

Some of the members of the MVMA discovered that Thomas was doing things for me [Burton]. Word got out in the Hopkins community that, if there was a difficult case, the client should come to my hospital. At one of the association meetings, the vets complained. "There's a man doing veterinary surgery. He is not licensed; he is not even a veterinarian."

I could see where this was going, so I stood up and said, "This man is a better surgeon than all of us in the room put together. I am the student and he is my teacher, but I am always working with him and he is under my direction. Furthermore, if you guys want to see some good surgery, you come by and see him." That was the end of that!

Burton described Thomas as "unquestionably the best canine surgeon of the time. His physical dexterity was phenomenal. His fingers were long and elegant, and his hands just flowed. He just made everything look so simple. He would have made a great pianist."¹⁷

Dr. Burton spent enough time in the Hopkins environment to see the impact Vivien Thomas had in that version of his world.¹⁸

There were many times over at Hopkins that I would hear an announcement over the loud speaker, "Vivien Thomas, get to room 7, or whatever, STAT." When he'd get there, they'd be waiting for him, and he would take his position at the shoulder of Blalock or another surgeon and guide them through the difficult part of the procedure. Vivien could never legally touch the patient, but he knew how to get around the problems when they encountered something they weren't sure how to handle.



Vivien Thomas (top left) stands behind Dr. Alfred Blalock during the ground-breaking operation for correction of Tetralogy of Fallot, November 29, 1944.

(Image courtesy of the Alan Mason Chesney Medical Archives of the Johns Hopkins Medical Institutions.)

Since my telephone interviews with Burton in 2010, complemented by reading Thomas's autobiography, I have thought many times of the interesting symbiotic relationship between Burton and Thomas. One was a confident and somewhat brusque veterinarian who judged his fellow man by the quality of their character and ability and not the color of their skin; the other, a timid but dedicated surgical technician who spent the majority of his working life classified as a janitor because of a segregated work place, where his abilities and impact were not publicly recognized until late in his life.

Whenever I think of them working together across racial barriers from the beginning, as colleagues and as friends, I am once again proud to be a veterinarian.

¹ Smith, Donald F. Vivien Thomas and the Role of Dogs in Experimental Surgery. *Perspectives in Veterinary Medicine*, May 23, 2013.

² [Something the Lord Made, www.wikipedia.org](http://www.wikipedia.org), (January 2014).

³ Burton, Harold U., (VMD, University of Pennsylvania, 1943; retired, Towson, MD). Telephone interviews with Donald F. Smith (Cornell University). December 3 and 10, 2010.

⁴ Ibid.

⁵ Ibid.

⁶ Now Hagyard Equine Medical Institute, Lexington, Kentucky.

⁷ Thomas, Vivien T. *Partners of the Heart. Vivien Thomas and His work with Alfred Blalock. Autobiography of Vivien Thomas* (Philadelphia: University of Pennsylvania Press, 1985), 208.

⁸ Burton, interviews with Donald Smith, December 2010.

⁹ Thomas, *Partners of the Heart*, 208.

¹⁰ Burton, interviews with Donald Smith, December 2010.

¹¹ Ibid.

¹² Ibid.

¹³ Ibid.

¹⁴ Thomas, *Partners of the Heart*, 208.

¹⁵ Ibid.

¹⁶ Burton, interviews with Donald Smith, December 2010.

¹⁷ Ibid.

¹⁸ Ibid.

KEYWORDS:

History of Veterinary Medicine
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Helen Taussig
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African-American Veterinarian
Discrimination

TOPIC:

African-American Veterinarian

LEADING QUESTION:

When were physicians better surgeons at canine surgery than veterinarians?

ABOUT THE AUTHOR:

Dr. Donald F. Smith, Dean Emeritus of the Cornell University College of Veterinary Medicine, had a passion for the value of the history of veterinary medicine as a gateway for understanding the present and the future of the profession.

Throughout his many professional roles from professor of surgery, to Department Chair of Clinical Sciences, Associate Dean of Education and of Academic Programs and Dean, he spearheaded changes in curriculum, clinical services, diagnostic services and more. He was a diplomat of the American College of Veterinary Surgeons and a member of the National Academy of Practices. Most recently he played a major role in increasing the role of women in veterinary leadership.

Perspectives in Veterinary Medicine is one of his projects where he was able to share his vast knowledge of the profession.