### Never Judge A Book By Its Cover: Nor Any People!

41st Annual Seminar of The American Academy of Cardiovascular Perfusion

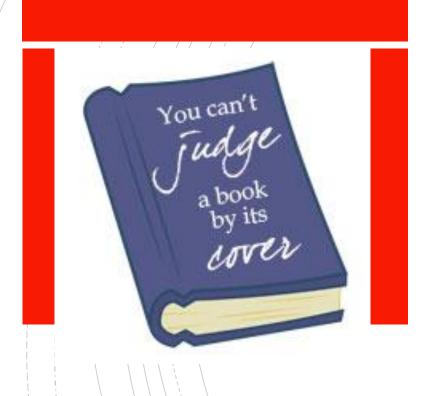
February 5 – 8, 2020

**Grand Sierra Resort** 

Reno, Nevada

Compiled By: Steven W. Sutton, L.P., C.C.P.

# CELEBRATE BLACK HISTORY MONTH

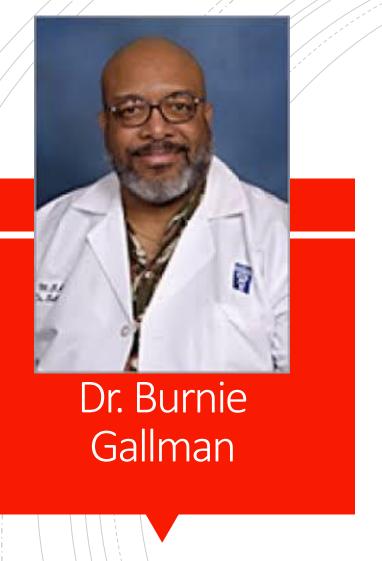


- One should not form an opinion on someone or something based purely on what is seen on the surface, because after taking a deeper look, the person or thing may be very different than what was expected.
- This "Idiom" means to judge not by the looks.

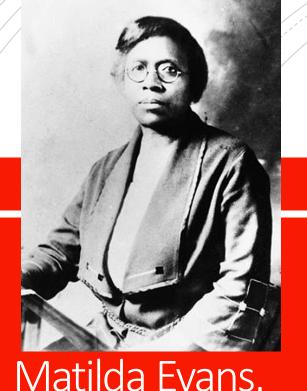
It goes back to at least the mid-19th century. It makes an appearance in the newspaper Piqua Democrat, June 1867 Piqua, Ohio:

"Don't judge a book by its cover, see a man by his cloth, as there is often a good deal of solid worth and superior skill underneath a jacket and yaller pants."





- "African people in America have lost our history. In many cases it's been taken away from us.
- But the problem ... even more pervasive ... is that we've lost our taste to learn our history
- History exposes past accomplishment, so "we don't have to recreate" the wheel. "All we have to do is respect and study our ancestors and build upon what they did."



Matilda Evans, M.D.





- Dr. Evans was born June 23, 1872, in Aiken and was a Schofield graduate who attended Oberlin College in Ohio on scholarship and the Women's Medical College of Pennsylvania, where she received her M.D. in 1897.
- Some people are worthy to be known for their continuity of struggle and example of achievement. One such person is Dr. Matilda Evans, the first Black female physician in South Carolina.

Matilda Evan's and her Home



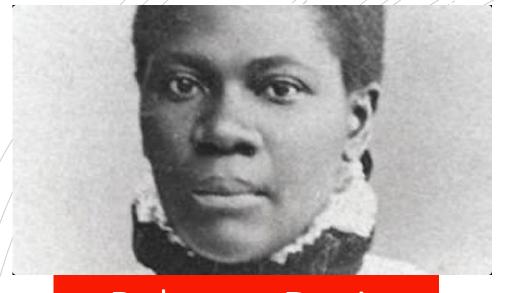
Matilda Evans in the operating room of Taylor Lane Hospital, the hospital she founded in 1901 Courtesy of South Caroliniana Library, University of South Carolina, Columbia

- She practiced Obstetrics, Gynecology, and Surgery. In 1901, she established Taylor Lane Hospital, the first Black hospital in Columbia, S.C.
- When the hospital was destroyed by fire, she started St. Luke's Hospital and School of Nursing.
- She founded the Good Health Association of South Carolina to educate people about preventive health practices and safe, sanitary habits.
- She provided a free clinic for Black children needing medical treatment and vaccinations.

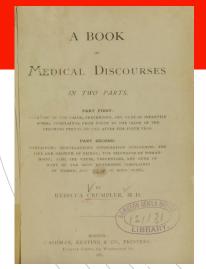


Matilda Evans with a community group in front of St. Luke's hospital, Columbia, South Carolina, ca. 1930 Courtesy of South Caroliniana Library, University of South Carolina, Columbia

- Charity, compassion, and a love of children were the hallmarks of her career
- She charged only nominal fees, riding bicycles, horses and buggies to visit the sick who were unable to go to her for surgery
- She provided for school physical examinations and immunizations, which in turn saved the lives of countless young children
- In 1930, operated a clinic that was free for African-American children who needed medical treatment and vaccinations
- Incredibly she also found the time to raise 11 children who needed a home, Many of the children she became a mother to were children who were left at her practice, but she also brought up five children from relatives who were deceased
- She never married, at the age of 63, on November 17, 1935,
   Matilda Arabelle Evans died in Columbia, South Carolina



#### Rebecca Davis Lee Crumpler, M.D.

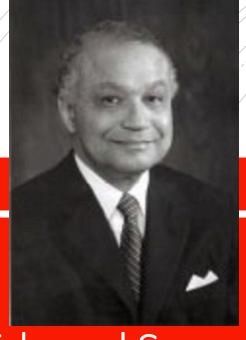


- 1864 Rebecca Davis Lee Crumpler is the first African-American woman to earn a medical degree.
- Crumpler established a medical practice in Boston for poor women and children. Crumpler also received training in the "British Dominion."
- She was also the first African-American to publish a text concerning medical discourse. The text, A Book of Medical Discourses was published in 1883.



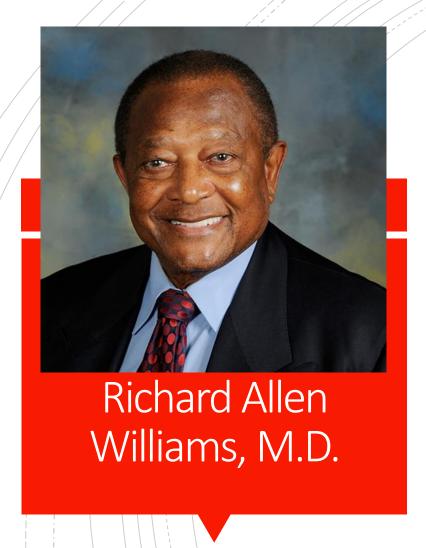
Mary Mahoney

- Mary Mahoney became the first black woman to complete nurse's training in 1879
- She was admitted to the nursing school of the New England Hospital for Women and Children
- She was also one of the first black members of the American Nurses Association
- Has been credited as one of the first women to register to vote in Boston following the ratification of the 19th Amendment in 1920
- Mahoney was inducted into both the Nursing Hall of Fame and the National Women's Hall of Fame. She died in Boston in 1926.



Edward Sawyer Cooper, M.D.

- Led the fight to eradicate the deadly toll of heart disease and strokes in the United States. Cooper became the first African-American elected president of the American Heart Association
- After attending Pennsylvania's Lincoln University, he went to Meharry Medical College, from which he graduated—again first in his class—in 1949
- He decided to specialize in cardiology and related problems such as strokes, because of an incident that occurred during his internship at Philadelphia General Hospital
- A patient of his, a woman under 40 years of age, became greatly debilitated by a series of small strokes. He was saddened by the sight of someone so young being stricken by circulatory disease in her prime and "was determined to do something about the problem"

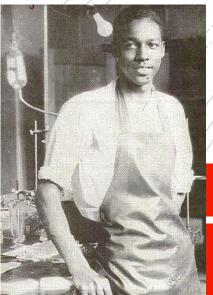


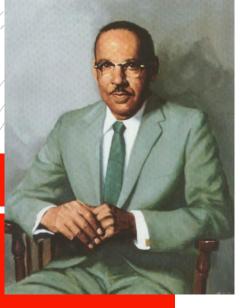
- Awarded a full scholarship to Harvard University graduating with honors as the first African American student at Harvard from Delaware
- Received his M.D. from State University of New York Downstate Medical Center, internship at the University of California San Francisco Medical Center, Internal Medicine residency at the Los Angeles County-USC Medical Center, and Cardiology fellowship at Harvard Medical School and Brigham and Women's Hospital in Boston
- Founded the Association of Black Cardiologists (ABC) in 1974 and served as its president for 10 years
- He also became the first chairman of the Board of Directors



Myra Adele Logan, M.D.

- Harlem Hospital, New York
- 1943, the first woman to operate on a human heart in only the ninth such operation (possibly a PDA Ligation) of its kind anywhere in the world
- First African American woman elected a fellow of the American College of Surgeons





# Vivien Thomas An Unknown African-American Hero

"The Carpenter"

#### **Overcame Racial Segregation**

- Laboratory supervisor who developed the Blalock-Taussig-Thomas Shunt to palliatively treat blue baby syndrome in the 1940's
- Assistant to surgeon Alfred Blalock in the experimental animal laboratory at Vanderbilt University and later at the Johns Hopkins University
- Served as supervisor of the surgical laboratories at Johns Hopkins for 35 years
- 1976 Hopkins awarded him an honorary doctorate and named him an instructor of surgery for the Johns Hopkins School of Medicine
- Thomas rose above poverty racism segregation to become a cardiac surgery pioneer and teacher of operative techniques to many of the country's most prominent surgeons

- He understood Helen Taussig's Idea
- It took two years

200 dogs to develop a safe and satisfactory

experimental surgical procedure

Vivien Thomas and assistants operating at Vanderbilt University, 1930's



"Vivien Thomas and assistants operating on laboratory dog at Vanderbilt University,"

The Sheridan Libraries and Museums

First used during World War II to treat critical injuries, albumin, processed from human plasma, has been safely used for more than 50 years to treat critically ill patients by replacing lost fluid and maintaining adequate blood volume and pressure. Today albumin also is used in cardiac surgery, heart valve repair and replacement, and to treat hemorrhagic shock.

Courtesy of the National Museum of Health and Medicine, Armed Forces Institute of Pathology, Washington, D.C.



- He was born in New Iberia, Louisiana August 29, 1910
- The grandson of a slave and son of a carpenter, Vivien Thomas attended Pearl High School in Nashville, and graduated with honors in 1929
- In the wake of the stock market crash in October, 1929 he secured a job as a laboratory assistant in 1930 with Dr. Blalock at Vanderbilt
- Together they conducted groundbreaking research into the causes of hemorrhagic and traumatic shock which saved the lives of thousands of soldiers on the battlefields during World War II

"Helen Taussig, examining small girl in wheel chair, circa 1947," The Sheridan Libraries and Museums



Left: Crosby, Ranice W., "Sketch," The surgical treatment of malformations of the heart in which there is pulmonary stenosis or pulmonary atresia. Procedure used. The Sheridan Libraries and Museums

Right: Anna was the first survivor of the pioneering procedure which was later named the Blalock-Taussig-Thomas procedure or the Blue Baby Operation Portrait of Anna the dog by DeNyse W. Turner Pinkerton, 1951.

- 1943, Blalock was approached by renowned pediatric cardiologist Dr. Helen Taussig, who was seeking a surgical solution to a complex and fatal congenital heart defect, Tetralogy of Fallot (also known as blue baby syndrome, although other cardiac anomalies produce blueness, or cyanosis)
- Vivien was charged with the task of first creating a blue baby-like condition (cyanosis) in a dog, then correcting the condition by means of the pulmonary-to-subclavian anastomosis. In nearly two years of laboratory work involving some 200 dogs, demonstrated that the corrective procedure was not lethal, thus persuading Blalock that the operation could be safely attempted on a human patient.



Alfred Blalock, M.D., 1899-1964. Portrait by Yousuf Karsh, 1950.

"Something The Lord Made" Thomas' surgical techniques included one he developed in 1946 for improving circulation in patients whose great vessels (the aorta and the pulmonary artery) were transposed. A complex operation called an atrial septectomy, the procedure was executed so flawlessly by Thomas that Blalock, upon examining the nearly undetectable suture line, was prompted to remark, "Vivien, this looks like something the Lord made."

During this first procedure in 1944, Thomas stood on a

procedure was published in the May 1945 issue of the

Journal of the American Medical Association, Blalock and

Taussig received sole credit for the Blalock-Taussig shunt.

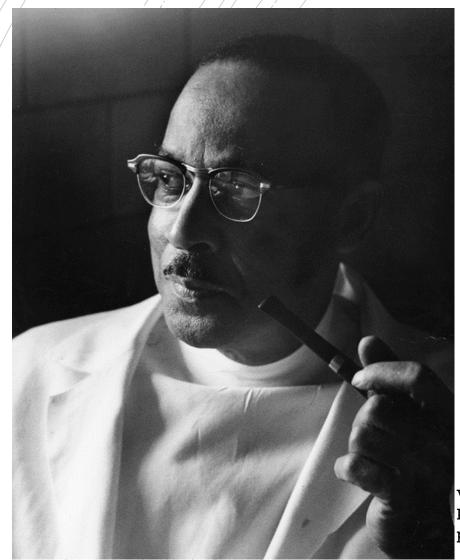
Thomas received no mention and, in Blalock's writings,

he was never credited for his role.

step-stool behind Blalock coaching him. When the

Robert D. Potter, "Saving our doomed blue babies,"
The Sheridan Libraries and Museums
The American Weekly, February 17, 1946

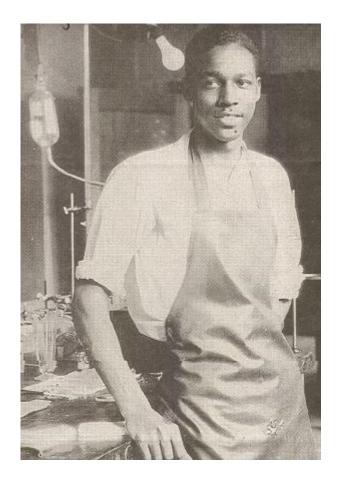
Clamp for the temporary occlusion of the pulmonary artery, devised for Blalock's use by Vivien Thomas and William Longmire, working with the Baltimore surgical supply house Murray Baumgartner & Co.

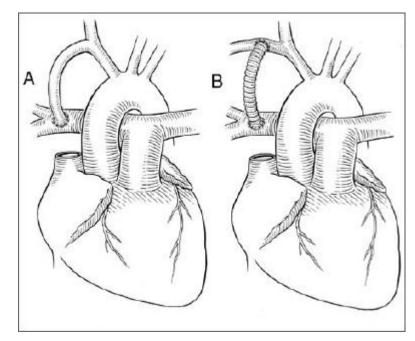




Vivien Thomas holding pipe, c. 1970s. Photogapher unknown, ""Vivien Thomas holding pipe, portrait photograph"," The Sheridan Libraries and Museums 1944, Vivien Thomas Standing behind Blalock, upper left

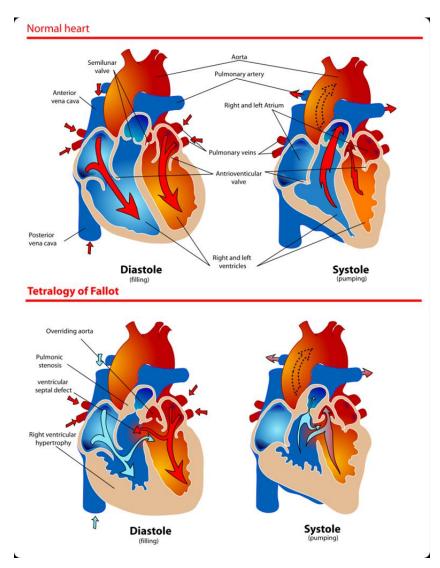






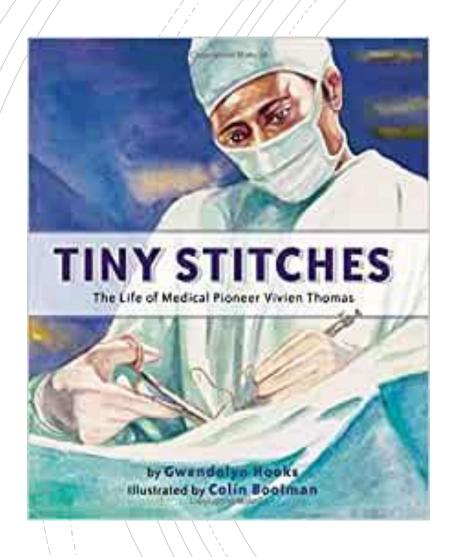
Schematic representation of the Blalock-Thomas-Taussig anastomosis between the right subclavian artery and right pulmonary artery.

A / initial anastomosis - B / modified anastomosis.



Approximately, 9–14% of babies with CHD's will have TOF (American Heart Association)

#### "Something The Lord Made"



- To the host of young surgeons Thomas trained during the 1940s, he became a figure of legend, the model of the dexterous and efficient cutting surgeon.
- "Even if you'd never seen surgery before, you could do it because Vivien made it look so simple," the renowned surgeon Denton Cooley told Washingtonian Magazine in 1989. "There wasn't a false move, not a wasted motion, when he operated."
- Surgeons like Cooley, Alex Haller, Frank Spencer, William Longmire, Albert Starr, Rowena Spencer, and others credited Thomas with teaching them the surgical technique which placed them at the forefront of medicine in the United States. Despite the deep respect Thomas was accorded by these surgeons and by the many black lab technicians he trained at Hopkins, he was not well paid.

### Vivien's Financial Struggles

- Two days before Christmas 1946, Blalock came to Thomas in the empty lab with Hopkins's final salary offer, negotiated by Blalock and approved by the board of trustees that morning. "I hope you will accept this," he told Thomas, drawing a file card from his pocket. "It's the best I can do it's all I can do."
- The offer on the card left Thomas speechless: The trustees had doubled his salary and created a new bracket for nondegreed personnel deserving higher pay. From that moment, money ceased to be an issue.
- He sometimes resorted to working as a bartender, often at Blalock's parties. This led to the peculiar circumstance of his serving drinks to people he had been teaching earlier in the day. Eventually, after negotiations on his behalf by Blalock, he became the highest paid technician at Johns Hopkins by 1946, and by far the highest paid African-American on the institution's rolls.





- Blalock's approach to the issue of Thomas's race was complicated and contradictory throughout their 34-year partnership.
- On one hand, he defended his choice of Thomas to his superiors at Vanderbilt and to Hopkins colleagues, and he insisted that Thomas accompany him in the operating room during the first series of tetralogy operations.
- On the other hand, there were limits to his tolerance, especially when it came to issues of pay, academic acknowledgment, and his social interaction outside of work.
- After Blalock's death, Thomas stayed at Hopkins for 15 more years. In his role as director of Surgical Research Laboratories, he mentored a number of African American lab technicians as well as Hopkins' first black cardiac resident, Dr. Levi Watkins, Jr., whom Thomas assisted with his groundbreaking work in the use of the Automatic Implantable Defibrillator.

Wife: Clara, Daughters: Theodosia Patricia and Olga Fay

### Vivien Thomas Pioneer & Hero In American Medicne



- In 1976, Johns Hopkins University presented Thomas with an Honorary Doctor of Law, (Law forbids Honorary Doctor of Medicine)
- Thomas was appointed to the faculty of Johns Hopkins
   Medical School as Instructor of Surgery
- Following his retirement in 1979, Thomas began work on an autobiography, Pioneering Research in Surgical Shock and Cardiovascular Surgery: Vivien Thomas and His Work with Alfred Blalock
- He died in November 26, 1985 of pancreatic cancer, at age 75, and the book was published just days later

# The Defects Making Children Cyanotic

- 1836 Total Anamolous Pulmonary Venous Return (TAPVR) or Scimitar Syndrome (Resembling a Turkish Sword, Scimitar) Discovered by Chassinat and Cooper
- 1673 Tetralogy of Fallot Discovered by Steno (Nils Stensen) and 1888 Described by Étienne-Louis Arthur Fallot
- 1793 Transposition of Great Arteries described by Matthew Baillie
- 1817 Tricuspid Atresia Kreysig first reported case, 1824 Holmes and 1906 Kuhne also described the defect; in 1812 a report by the editors describes the defect with no specific use of the term "tricuspid atresia" yet it appears to fit the description

Cyanotic Congenital Heart Disease (CHD) comprises up to 25% of cases of all causes of CHD

CHD is considered to be the most major congenital anomaly and a leading cause of mortality in the first year of life

## To treat these complex defects required the arrival of Vivien Thomas - his innovative genius - surgical skill and ultimately: "The Heart Lung Machine!"

The Defects
Making Children
Cyanotic cont.

- 1851 Hypoplastic Left Heart Syndrome (HLHS) initial description by Bardeleben of Germany and later described by Maurice Lev in 1952
- 1778 Aortic Arch Interruption first Type A identified by Raphael Steidele, 1818 first Type B by Seidel, 1948 first Type C by Weisman and Kestin, 1959 classification system (Types A, B,C) defined by Celoria and Patton
- 1699 Univentricular Heart first described by Chemineau
- 1864 Persistent Truncus Arteriosus first described by Buchanan
- 1866 Ebstein's Anomaly described by Wilhelm Ebstein, by
   1950 only 3 cases of this anomaly had been published



### Hamilton Naki "The Gardener"



#### **Overcame Apartheid In South Africa**

- Laboratory assistant to cardiac surgeon Christian Barnard in South Africa compared modernly to Vivien Thomas and Alfred Blalock
- He was recognized for his surgical skills and for his ability to teach medical students and physicians despite not having received a formal medical education, and took a leading role in organ transplant research on animals
- Barnard was quoted as saying "If Hamilton had had the opportunity to study, he would probably have become a brilliant surgeon" and that Naki was "one of the great researchers of all time in the field of heart transplants"

Barnard said of Naki, he was better at stitching than he was!



# On Apartheid: "I opposed it whenever I could," he said. "But I didn't stick my neck out." Christian Barnard

- June 26, 1926 Naki was born in Ngcingane Village (15 miles from Umtata, a large town in the eastern cape) or Centane as it is referred to in the eastern cape province of South Africa, the poorest province in South Africa, unemployment exceeds 70%
- Educated to Standard 6 (8<sup>th</sup> grade equivalent)
- Age 14 quit school and moved to Capetown once his family could no longer support his studies
- Found work as a gardner tending the lawns at the University of Cape Town Medical School
- 1954 He was selected to help Dr. Robert Goetz doing research with laboratory animals
- Goetz was Jewish doctor who had escaped from Nazi Germany
- Over the course of time, Naki took on responsibilities of shaving, injecting and dissecting animals (e.g., pigs, rabbits, dogs, etc.)



The world's first human heart transplant was performed at Groote Schuur Hospital in Cape Town by the South African surgeon, Christiaan Barnard. This is the first photograph of the surgical team taken on the afternoon of Sunday, December 3, 1967. Credit: David K.C. Cooper USAGE RESTRICTIONS: None

- He also assisted Dr. Goetz in dissections of jugular veins on giraffes to study the structure and function of valves to understand why giraffes don't faint when they bend so low to drink water
- He became an expert in dissection, organ transplantation and surgical anastomosis
- When Christian Barnard returned to Groote Schuur Hospital (surgery resident 1953-56) after training at the University of Minnesota (1956-58), he asked Naki to join his transplant team in research
- The hospital gave permission under the condition that Naki keep his role secret because he was black, Apartheid Laws forbade him from cutting white flesh or dealing with white blood
- For 50 years, hospital records listed him as a gardener

Groote Shuur Hospital, 1967

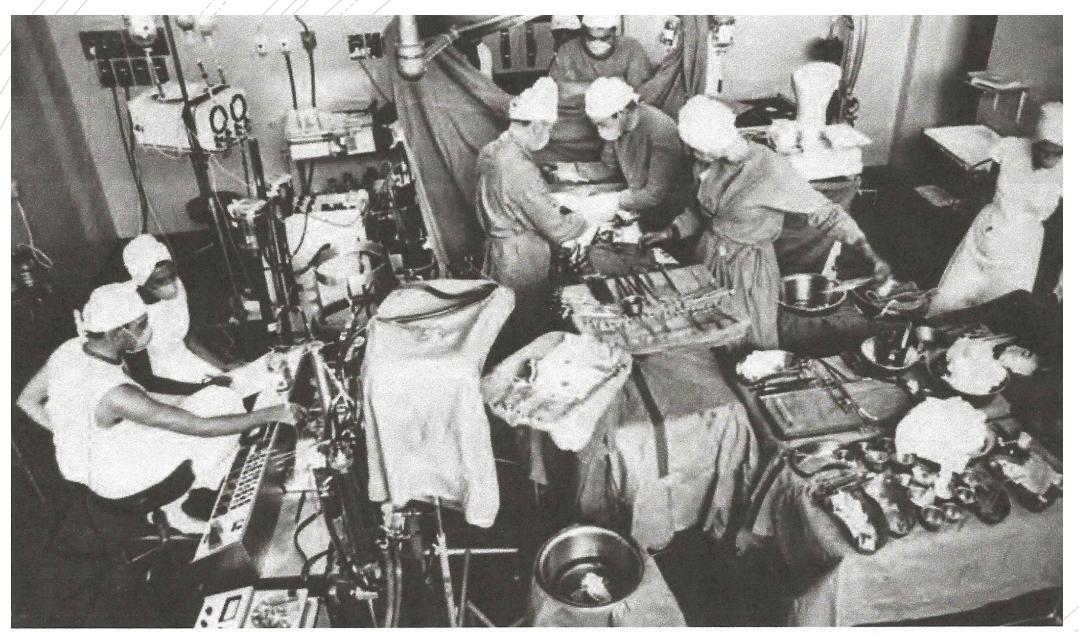


- Edward Darvall arranged for his fourteen-year old son Eric, who had witnessed the accident, to be taken away from the hospital.
- The 66-year-old Edward was also given a sedative, and he waited while doctors attempted to save his daughter. Two doctors, Coert Venter and Bertie Bosman, informed him that there was nothing further they could do for Denise. Bosman explained that there was a man in the hospital they might be able to help, and asked Edward if he would consider allowing them to transplant Denise's heart.
- Edward Darvall later said that, after thinking about his daughter for four minutes, he reached his decision and gave permission.
- The public record shows that Edward Darvall mostly shunned publicity. He had undergone major stomach surgery, but his strength of character and dignity earned him many admirers. Before the joint funeral of his wife and daughter, he asked for donations to be sent to the Groote Schuur cardiac unit.
- Darvall was present at the trial of the drunk driver who was convicted of murder. Darvall, heartbroken, made a statement through a lawyer, asking the magistrate to show the "greatest possible mercy" to the driver. "The tragic death of his daughter was not meaningless, but benefited humanity," he said.

Every Second Counts: The Race to Transplant the First Human Heart, Donald McRae, New York: Putnam, 2006, page 189. "Heart transplant". transplantaciya.com (in Russian). Retrieved 23 November 2018.

- Surgeons had a serious ethical problem because death then could only be declared by whole-body standards.
- The Harvard Criteria of Brain Death was not developed until 1968, nor was it adopted in South Africa or elsewhere for some years.
- The problem in this case was that, although Denise's brain was damaged, her heart was healthy.
- Various reports over the years attributed conflicting reasons for her heart stopping.
- For 40 years, Barnard's brother Marius kept a secret: rather than wait for her heart to stop beating, at Marius's urging, Christiaan had injected potassium into Denise's heart to paralyze it. This rendered her technically dead by the whole-body standard.

Every Second Counts, McRae, page 192.



Professor Christiaan Barnard and his team perform the world's first successful heart transplant in 1967.

"Hamilton Naki. Apartheid's shadow. How an inspiring life became distorted by politics",

The Economist, 14 July 2005, retrieved 14 August 2010

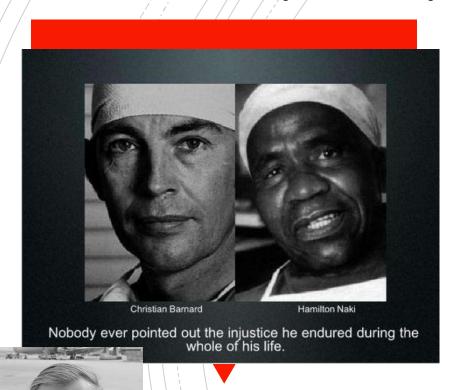
Van Den Ende, J.; Moreira, J.; Basinga, P.; Bisoffi, Z. (13 August 2005), "

Department of error", Lancet, 366 (9485): 548,

doi:10.1016/s0140-6736(05)67097-3, PMID/16099289,

retrieved 14 August 2010October, Alicestine (2 June 2009),

"Dokkie 'verdraai' Barnard-verhaal", Die Burger, retrieved 14 August 2010



Marius Barnard

#### **A Labor In Obscurity**

Controversy surrounds the December 2, 1967 World's First Heart Transplantation by Barnard who prepared the recipient Louis Washansky to receive the first human donor heart while – Naki with amazing dexterity removed the donor heart from Denise Darvall a white female

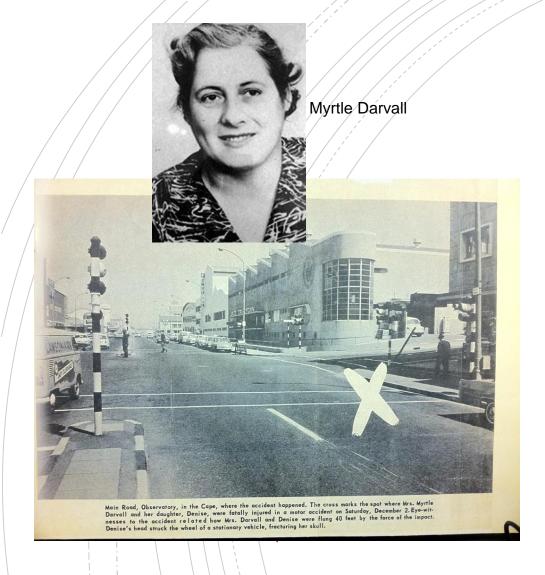
- However, Marius Barnard was one of the surgeons who removed the heart from donor Denise Darvall; stated that Naki was at the time "in his bed, about 8 km away from Groote Schuur".
- Barnard became an instant celebrity
- Naki appeared in postoperative photographs beside Dr. Barnard, the hospital claimed he was a gardener
- Naki became excellent at liver transplantation teaching the technique to many residents
- Barnard did not acknowledge Naki's role until the end of apartheid in 1991
- Barnard finally admitted on record Naki's role on his death bed in 2001
- Naki retired in 1991 from the University of Cape Town Medical School on a gardener's pension of a few hundred dollars per month

Both Hamilton Naki and Christian Barnard died of heart disease



Denise Darvall "A Gift To Humanity"

- February 27, 1942 December 3, 1967
- Not known if she contemplated this marvelous gift
- The Darvall family lived in a two bedroom apartment near Riebeeck High School
- She loved classical music and Barbara Cartland novels
- A talented seamstress who designed and sewed beautiful gowns
- At age 25, Denise had a promising career ahead, she had been promoted at the bank with a large salary increase
- She used the money to purchase a new Ford Anglia "the pride of the Darvall family"



- In her new vehicle, she and her family departed for afternoon tea on December 2, 1967 in route to the home of family friends in Milnerton
- At 2:45 p.m. they departed from home, Denise was driving humming the theme song of the movie Doctor Zhivago, she had spent the day teaching her brother the tune on the piano
- Denise and her mother Myrtle decided it would be in good manners to take a cake for the tea and stopped at Joseph Coppenberg's Bakery for one of hjs famous caramel cakes
- Denise parked across the street from the bakery, they would have to cross the busy Main Street

Edward Darvall, Myrtle's husband and Denise's father, who witnessed the horrific event, was now only a kilometer or so from the site of the accident, sitting on a hard wooden chair in the emergency room at the main entrance of Groote Schuur Hospital.

Mr Darvall's wife was dead and his daughter gravely wounded. After extensive examination and investigation by two neurosurgeons, Denise Darvall was determined to be brain dead.

Mr Darvall and now lost his daughter, but Barnard and Washansky had gained a donor.



### Death Is Not In Vain



- Coincidentally Mrs. Ann Washkansky drives past the scene of the accident, she had just visited her ill husband, Louis Washkansky, in hospital
- Denise was taken to Groote Schuur Hospital and declared brain dead at 9:00 p.m.
- Her father, Edward made a life changing decision and one for humanity approving organ donation of her heart and kidneys

Edward & Myrtle Darvall

Edward died in 1970 never regretting his decision!









This combination of undated file photographs created on December 1, 1992, shows Louis Washkansky (L) and Denise Ann Darvall (R) in South Africa. Washkansky received Darvall's donated heart in a pioneering transplant by surgeon Christiaan Barnard



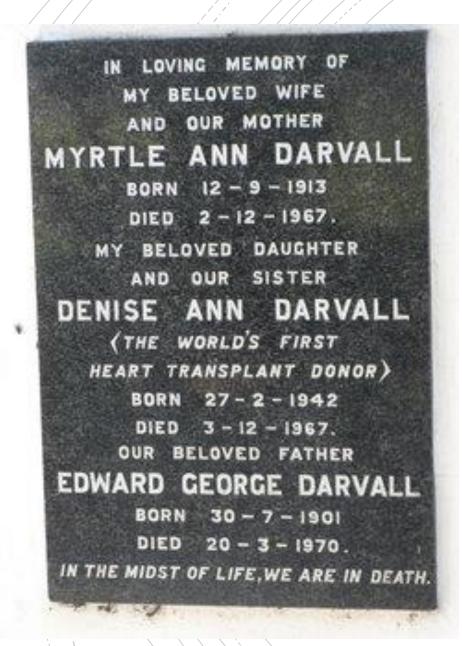
- In late November 1967, a potential donor was identified
- A young black man had fallen off a truck and suffered a catastrophic head injury
- Although the Chief of Cardiology, Val Schrire, had previously expressed a strong preference to avoid a "colored" donor, police approached the young man's family for permission for him to be a heart donor, the family was "in shock after they were confronted by a policeman"
- The EKG of the donor heart, however, showed depressed ST segments, meaning that it might have been damaged or was not receiving enough oxygenated blood and gave the reluctant Val Schrire a medical reason not to continue with the transplant of a "colored" donor heart in apartheid South Africa
- Washkansky, who had been cleaned and shaved for the possible attempt, felt let down and disappointed when it didn't go forward
- He felt his future chances were slim.



- Louis Washkansky (1913 December 21, 1967)
- Recipient of the world's first human-to-human heart transplant
- The first patient to regain consciousness following the operation, Washkansky lived for 18 days and was able to speak with his wife and reporters
- He was actually the second human recipient of a heart transplant overall, James Hardy had done a transplant in 1964 in which Boyd Rush received a chimpanzee's heart, although the patient in that case only survived an hour and did not regain consciousness



Sarns 5000 HLM Rygg Bag Oxygenator



Denise's Gift of Life may have been short lived for Louis Washansky, imagine the countless lives her gift has saved throughout the world since greater understanding of transplantation has been elucidated

Her Husband Got the Heart... His Daughter Gave It







Mrs Ann Washkansky and Mr Edward Darvall | Life Magazine

### The respect he earned is seen by the fact that university graduates after graduation first go to his grave and get a picture taken and then enter their practical lives.



- 2002 President Thabo Mbeki presented him the country's highest order, the Order of Mapungubwe for his years of public service
- 2003 Graca Machel, the University of Cape Town vice chancellor and wife of former President Nelson Mandela bestowed an Honorary Degree In Medicine on Naki in recognition of his achievements
- For most of his professional life, Naki lived in relative obscurity in a cramped one-room house without electricity and running water in the grim Cape Flats townships created outside the city center by the apartheid government
- During retirement Naki achieved a life-long ambition of collecting enough money for a school he was never able to afford for education of his own four children
- He made rounds once a year to doctors he trained and "No" was not an acceptable answer when collection time came

Hamilton Naki died May 29, 2005 The world of transplantation lost a gentle giant!



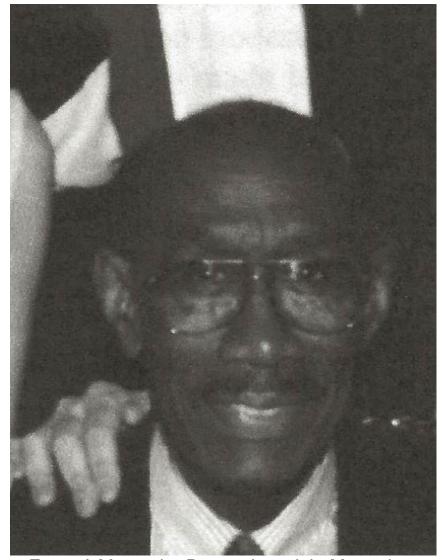
Controversy

- A 2007 book traced the origin of the incorrect story to a 1993 article in the Associated Press that stated "Barnard had Naki on his heart-transplant backup team... When Barnard performed the first heart transplant in 1967, Naki was part of the backup team at Groote Schuur Hospital in Cape Town." The story "blossomed into accepted fact" which was partly attributed to neither Barnard nor Naki taking steps to refute the story.
- A documentary film Hidden Heart which was released widely in 2009 included interviews with Christiaan Barnard and Naki suggesting that Naki was present at the 1967 heart transplantation.
- Marius Barnard was quoted as describing the claims in the film that Naki removed the donor heart as "rubbish, a joke, it's a total distortion of the facts" and as stating that Naki was at the time "in his bed, about 8 km away from Groote Schuur". The co-director of the film "acknowledged that Naki was not present the night of the operation." A South African Broadcasting Corporation investigation after the release of the film quoted five people about the event:
- Tollie Lambrechts, a member of the transplantation team, said Naki "was definitely not in the operating room on that night."
- Dene Friedmann, a member of the transplantation team, said Naki "was not here that night, the only people here were the ones that would actually do the work. Hamilton never worked in the theatres. He wasn't allowed to operate on a human being without a medical and surgical degree."

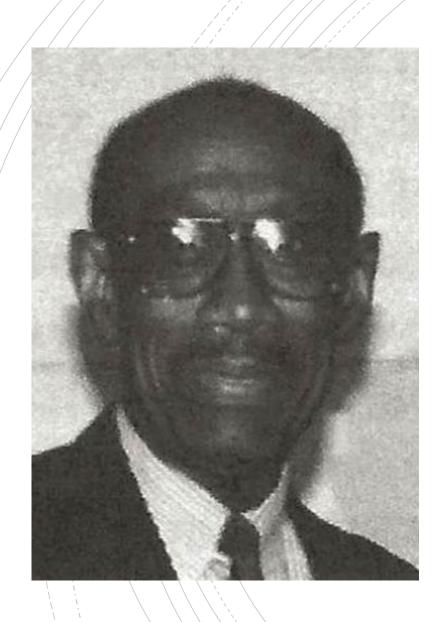
# A Tribute To Distinguished African American Perfusionists

Bennett Mitchell, C.C.P. 1923-2002

Born in Port of Spain, Trinidad, West Indies Graduated with a Master's Degree from Fordham University



From: A Man to be Remembered. In Memorium. Paul R. Cappola. JECT 2002; 34:168-171



- A Pioneer in Perfusion Science and Practice
- 1955 He assisted in performing cross-circulation on a child whose mother was used as the biologic oxygenator
- He performed hypothermic perfusion using the atrial well
- Built the first heart-lung machine used in experimental surgery at his institution
- 1956 Operated the heart-lung machine used on the first clinical open heart surgical procedure at Cornell Medical Center, New York City
- Operated DeWall Lillehei Oxygenator, Mayo-Gibbon, and Waters Membrane
- Built his own "Mitchell" Oxygenator

"You will never do anything in this world without courage. It is the greatest quality of the mind next to honor."

Aristotle

- He is described as a role model to all and our profession
- He possessed great empathy for others and a tremendous capacity for managing stressful situations
- Globally respected
- 1995 Gibbon Award Recipient by AmSECT
- He coined the term "Perfusionist"
- A Man of Honor and Dignity

#### Barbara Stephens, C.C.P. 1935 –

From: Fall 2019 The Academy Newsletter Stepping Up Your Game A Tribute to Betty Stephens, C.C.P. By: Carmen Giacomuzzi, President AACP

#### "A Tyler, Texas Rose"



## Some of Betty's Qualities

- An inspirational soul
- Driven
- Dedicated
- Empathic
- Educator
- Spiritual
- Outspoken Advocate
- "Dressed to the nines"



- 1953 Moved to Portland Oregon, lived with her Aunt and Uncle helping tend to their children while attending school
- Professional career at Oregon Health & Science University
- 1958 Albert Starr asked Betty to manage his cardiovascular research laboratory, also worked as a scrub nurse in open heart surgery
- August 25, 1960 Instrumental in contributions to the development of Mitral Prosthetic Caged Ball Valve and hand-sewing the sewing ring to the Starr-Edwards Valves first implanted on this date
- 1960-1963 Trained as a Perfusionist
- July 16, 1973 Certified as a Perfusionist by AmSECT

"Only a life lived for others is a life worthwhile."

Albert Einstein



1958 Albert Starr's Research Team Betty Standing Back Right Albert Starr Standing Third From Left

Source: Ann Thorac Surg

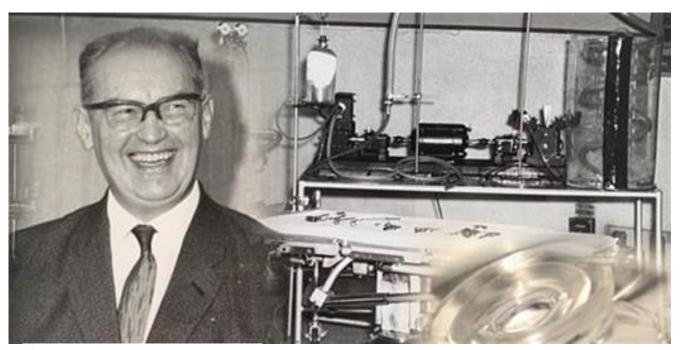
1991;51:521-6

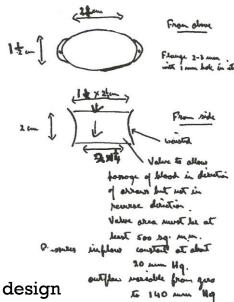
Source: The Worshipful Society of Apothecaries of London

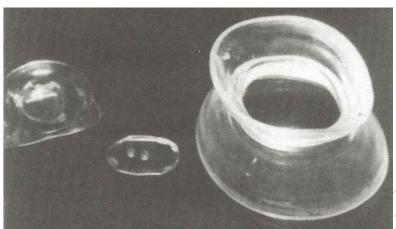
#### Judson T. Chesterman

First Mitral Valve Replacement In The World July 22, 1955

> City General Hospital, Sheffield, England Patient Survived 14 hours







Disassembled Mitral Perspex Valve: outer casing (right), extracardiac button (center) And poppet valve (left)

Original sketch for valve design

## Betty Stephens & Monumental Medical History

- Working with Albert Starr, M.D. who met Lowell Edwards an engineer in 1958, this fateful meeting convinced Edwards to reverse from developing an artificial heart or "imitating the heart" to as Dr. Starr stated "to work on one valve at a time"
- A few years later Wilem Kolff visited Lowell Edwards showing him a model-device appearing very much like the Jarvik VII containing four Silastic ball valves
- Lowell Edwards listened to Dr. Starr and became totally committed and consumed with the valve project; an artificial heart could wait; the rest is history
- 1958-1960 Edwards worked in his laboratory in a wooden shed outside his cabin on Mt. Hood and his small high-tech development company in Portland, Oregon, Don Shiley was the foreman
- Dr. Starr worked in his laboratory directed by Betty Stephens

Source: The Development of the Starr-Edwards Heart Valve

Texas Heart Institute Journal 1998;25:282-93.

The Team 1<sup>st</sup> Starr **Edwards Mitral Valve Implant** September, 1960



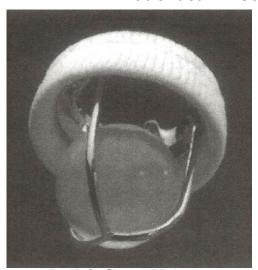
Lowell Edwards,



First Successful Human Mitral Valve Replacement September 21, 1960 Patient survived 15 years



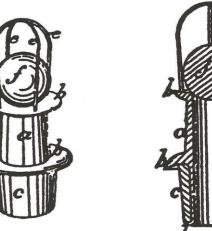
Albert Starr



Ball & Cage Valve Model 6000 Starr-Edwards



Design attributed to 1858 Bottle Stopper Patent by Williams Patent Number: 19323



"The love in your heart wasn't put there to stay, love isn't love till it's given away."

Unknown



**Photograph:** A Special Luncheon Honoring Betty With Presentation Of Her Emeritus Certificate In Cardiovascular Perfusion, A Title Conferred By The American Board of Cardiovascular Perfusion, In Honor Of Those Who Represent Distinguished And Lengthy Service In Contribution To Our Profession.

Luncheon Hosted By: Irving Shen, M.D., Chief of Pediatric Cardiothoracic Surgery, Oregon Health & Science University (OHSU) Portland, Oregon, he also worked with Betty in years past. Also pictured are Fellow Staff Members and Carmen Giacomuzzi, Chief Perfusionist and President American Academy of Cardiovascular Perfusion.

- First African American female and first African American Chief of Perfusion in Oregon
- Very likely the First Female African
   American Chief of Perfusion in the United
   States
- 2000 Betty retired after 43 years of service at Oregon Health & Science University
- 2019 Emeritus Certificate in Perfusion

"Friendship is born at that moment
when one person
says to another, 'What! You too?
I thought I was the
only one."
C.S. Lewis



**Additional Reception Photograph:** 

Dr. Shen at Right, Carmen Center Back Row and Betty Front Center along with Staff Members gathered in her honor.

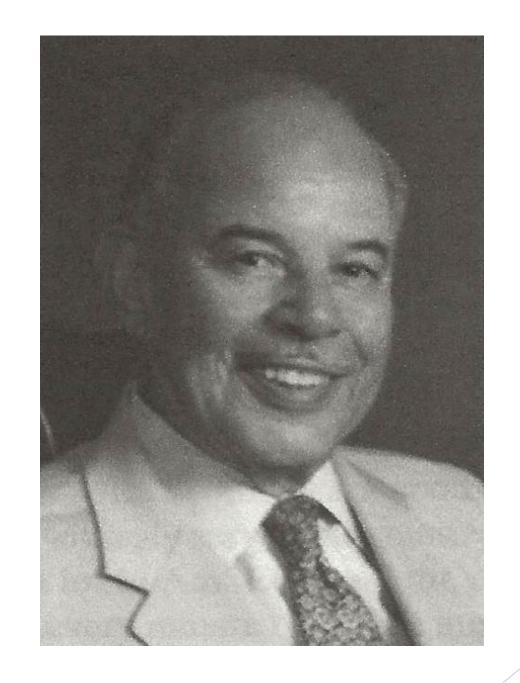
The purpose of life is not to be happy. It is to be useful, to be honorable, to be compassionate, to have it make some difference that you have lived and lived well.

Ralph Waldo Emerson

THANK YOU BETTY STEPHENS!
YOU ARE A GIFT TO BE SHARED
BY ALL OF US.

- Betty had a unique perspective as a Perfusionist and Mother, she had two children who required surgical repair of Atrial Septal Defect
- Her oldest daughter was the 2000<sup>th</sup> open heart procedure performed by Albert Starr
- She was a patient and enthusiastic teacher to Nurses and Perfusionists working side-by-side with the late Jeri Dobbs, her colleague and close personal friend
- She is a champion and advocate for African American women in her community
- She is a volunteer with the National Council for Negro
   Women helping female inmates reintegrate into society
- She educates young African American teenagers on "social graces and proper manners"
- Her church in the south motivated this mentorship

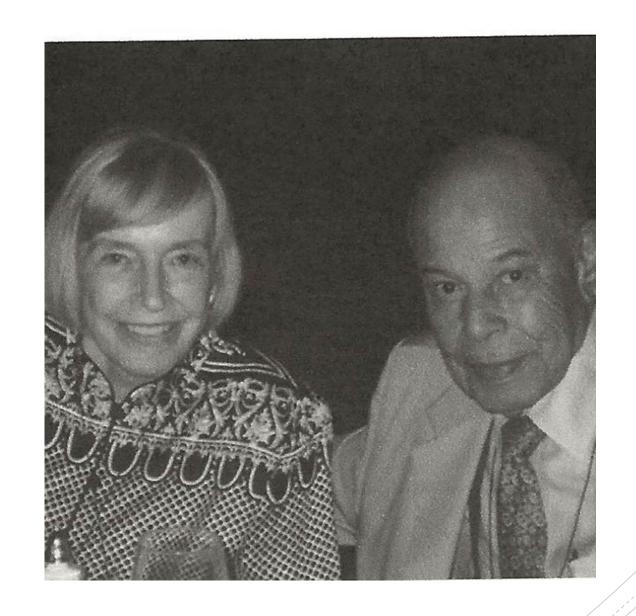
Calvin Scott, C.C.P. 1922-2015



B hopeful, B happy, B cheerful, B kind, B busy of body, B modest of mind, B earnest, B truthful, B firm and B fair... B watchful, B ready, B open, B frank, B manly to all men, whatever B their rank; B just and B generous, B honest, B wise... B temperate, B steadfast, to anger B slow. B thoughtful, B thankful, whate'er may B tide... B pleasant, B patient, B fervent to all, B best if you can, but B humble withal. B prompt and B dutiful, still B polite; B reverent, B quiet, and B sure and B right... B grateful, B cautious of those who B tray. B tender, B loving, B good and B nign, B loved thou shalt B, and all else B thine.

"A Swarm of Bees,"
The British Bee Journal, and Bee Keeper's Adviser,
1882 February 1st

Special Friends
Calvin and
Maddie
Massengale-Beall



### Calvin Scott Qualities



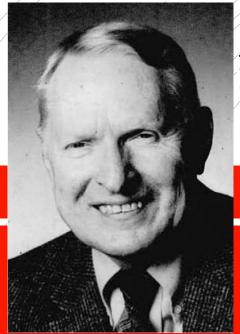
- Quiet
- Steadfast
- Gentle
- Past President AmSECT in the societies formative years, always calm and reassuring
- 1975 One of the first Directors of the ABCP when it was founded
- Graduated from Howard University after serving with an elite group of soldiers known as "The Prometheans" (named after the Greek god Prometheans, who gave light and knowledge) in the U.S. Army during World War II
- As a veteran, he served in France shortly after the D-Day Invasion during World War II

L-R Photo 2015 AACP Induction Dinner: Mark Kurusz, Calvin Scott. Jay B. Denman, and Earl Lawrence



Calvin Scott in group photograph at the 2015 AACP Induction Dinner

- Prometheans were founded by young Black 92nd Division combat soldiers as they fought together on foreign soil during World War II.
- These young Blacks met as a result of the Army Specialized Training Program (ASTP) initiated in 1942, and instituted at Howard University in 1943.
- The purpose of the ASTP was to insure a continuous flow of technically and professionally trained men for the Army's World War II effort.
- The 300 Black youth recruits from all parts of the country who formed Howard's ASTP detachment were given training in engineering, medicine and dentistry.
- Most were assigned to active duty in early 1944. Most of the engineering students were assigned to the 92nd Infantry Division, the famed "Buffalo Soldier" Black combat division.



Jeri Dobbs on Calvin Scott "Scottie"

Jeri Dobbs, 1935-2015

Source: J Extra Corpor Technol. 2015; 47(4): 205–208.

Tribute Jeri L. Dobbs: 1935–2015 Mark Kurusz, CCP (Emeritus)

- He became your friend the minute you were first introduced
- He was everyone's friend, always a "Gentleman"
- He served in many leadership positions on committees for AmSECT
- An extraordinary man and lived a full life





Never Again!





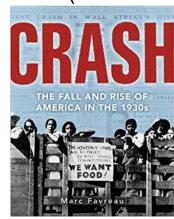


Survival For Them Was No Simple Task!





- They Overcame many social barriers including:
- Racism Segregation Exclusion Horror of Lynching's
- They Survived The Great Depression World War II Black Blizzards (Dust Bowl)





We Thank Them For Innovating and Leading

May we never witness such abhorrent indecency "EVER" again

 God Bless Our Colleagues Who Faced These Struggles and Became "Innovators In Perfusion Science" – Gifting Themselves To Us!!!

### The End