

## The American carpenter and the African gardener: Parallel lives in Medicine and the Cinema

Guillermo Enrique D'Ottavio Callegari<sup>1</sup>, María Eugenia D'Ottavio Callegari<sup>2</sup> and Alberto Enrique D'Ottavio Cattani<sup>1, 3</sup>

<sup>1</sup>Cátedra de Histología y Embriología, Facultad de Ciencias Médicas, Universidad Nacional de Rosario, Rosario (Argentina);

<sup>2</sup>Licenciatura de Psicopedagogía, Universidad Nacional de San Martín (en convenio con la Fundación del Gran Rosario) Rosario (Argentina); <sup>3</sup>Consejo de Investigaciones, Universidad Nacional de Rosario, Rosario (Argentina).

Correspondence: Alberto Enrique D'Ottavio - Matheu 371 - 2000 Rosario (Santa Fe) (Argentina).

e-mail: [aedottavio@hotmail.com](mailto:aedottavio@hotmail.com)

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### Summary

This article tackles the lives of two people - Vivien T. Thomas, the American carpenter, and Hamilton Naki, the African gardener-who, living in hostile environments with few means and hounded by racial segregation, managed to achieve such success in the field of medicine that both contributed significantly to it, together with physicians as well known as Alfred Blalock and Christian Barnard. In due course, even though they had not managed to become physicians (as they had wished to be) both received honorary doctorates. They are revered in their respective countries of origin and were portrayed in the cinema: *Partners of the Heart* (2003) by Bill Duke and Andrea Kalin and *Something the Lord Made* (2004) by Joseph Sargent in the case of Vivien T. Thomas, while in the case of Hamilton Naki there is a documentary in project phase: *Hands of a Forgotten Hero*. These films could serve as examples for health students and professionals, in particular, and the public in general, and could serve as material for debate as regards their academic, ethical-moral and humanitarian aspects.

**Keywords:** Vivien T. Thomas, Hamilton Naki, Cardiac Surgery, Tetralogy of Fallot, Blue Baby Syndrome, Heart Transplantation.

### The American carpenter

Vivien Theodore Thomas (figure 1) was an Afro-American surgical technician who in the forties of the past century developed a technique to combat the tetralogy of Fallot.

He was born in New Iberia, close to Lake providence (Louisiana, USA), on 29 August 1910. His family later moved to Nashville (Tennessee), where in the twenties he studied in state schools, among them Pearl High School (now known as Pearl Cohn Magnet High School) within an educational system plagued by racial segregation. To finance his studies he worked as a carpenter and in 1929 he registered as a pre-med student at the Tennessee Agricultural and Industrial College. The Great Depression of the same year took his life's savings away and he had to quit his studies. In 1930, he started to work as a laboratory assistant to Alfred Blalock

(figure 2) at Vanderbilt University (Nashville, Tennessee). His skill as a surgical and research assistant (together they investigated the causes of hypovolaemic shock, later applying their findings to the crush syndrome) led Blalock to take Thomas with him when he changed to Johns Hopkins University (Baltimore, Maryland) in 1941. When he went, Thomas was accompanied by his wife Clara and his son. In 1943, Blalock began to collaborate with Dr. Helen Taussig (figure 3), who had an idea for treating blue babies (the tetralogy of Fallot and other congenital cardiopathies). Dr. Taussig was also subjected to discriminatory practices, in this case gender-based, since although Johns Hopkins University, which did accept women, allowed her in the Faculty only contracted her as a tenured professor when she had gained international renown after 16 years of hard work as a mere instructor. Moreover, Taussig was in far advance of her times since she supported the admission of blacks into medical school and into

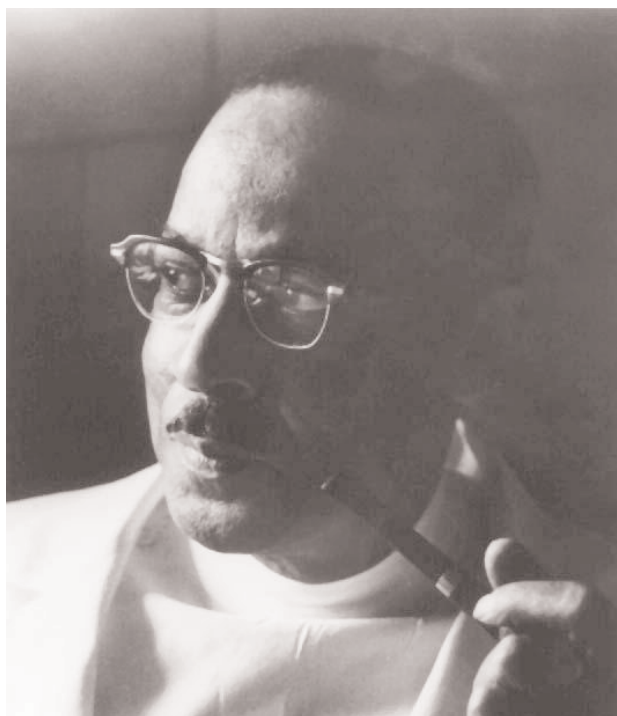


Figure 1: Vivien Theodore Thomas



Figure 2: Alfred Blalock

the Medicare social security system. She was also pro-abortion. She had suggested that a suitable procedure for improving the “blue baby” syndrome was to increase blood flow from the heart to the lungs. This involved the development of an extremely complicated surgical technique and demanded new surgical instruments. Thomas understood her idea and after two years of work and experimentation

with 200 dogs he developed a satisfactory experimental surgical procedure. The first dog to be operated, called Ana, is the only animal whose photo hangs on the walls of Johns Hopkins University. At the end of 1944, helped by Thomas, she operated on her first patient, Eileen Saxon, who only survived for two months. However, her next patient, a girl of eleven, was discharged from hospital after three weeks. Both cases, together with a third one (of a 6-year old boy) formed the core of an article by Blalock and Taussig published in 1945 in the Journal of the American Medical Association (Blalock A, Taussig H. The surgical treatment of malformations in the heart in which there is pulmonary stenosis or pulmonary atresia. JAMA 1945; 128: 189-202) in which Vivien Thomas was not even mentioned. Evidently, the procedure is known as the Blalock-Taussig technique. In one year, more than 200 operations were performed.

Meanwhile, Thomas began to train other surgeons in the procedure but his financial status was so poor that he had to take up work as a waiter at the same time. Nevertheless, after negotiating with Blalock in 1946 he managed to become the best paid technician at Johns Hopkins. In 1947, Thomas attempted to revisit his medical studies but despite



Figure 3: Helen Taussig

his registration at the Morgan State University reality soon changed his mind. Blalock, who held a somewhat favourable-unfavourable disposition towards blacks in general as regards internal recognition and external constraints, died at 65, having spent 34 of them working with Thomas.

In 1975, Johns Hopkins University recognised Thomas' work with an honorary doctorate in Law since owing to certain restrictions he was unable to opt for a doctorate in medicine.

Thomas encapsulated his life in *Partners of the Heart: Vivien Thomas and His Work with Alfred Blalock*, whose last edition published by the University of Pennsylvania Press dates from 1988 (figure 4). He died on 26 November 1985 when he was 75.

Johns Hopkins Medicine has created the "Vivien Thomas Fund" aimed at increasing diversity at the Johns Hopkins University School of Medicine, breaking both economic and racial barriers<sup>1-4</sup>.

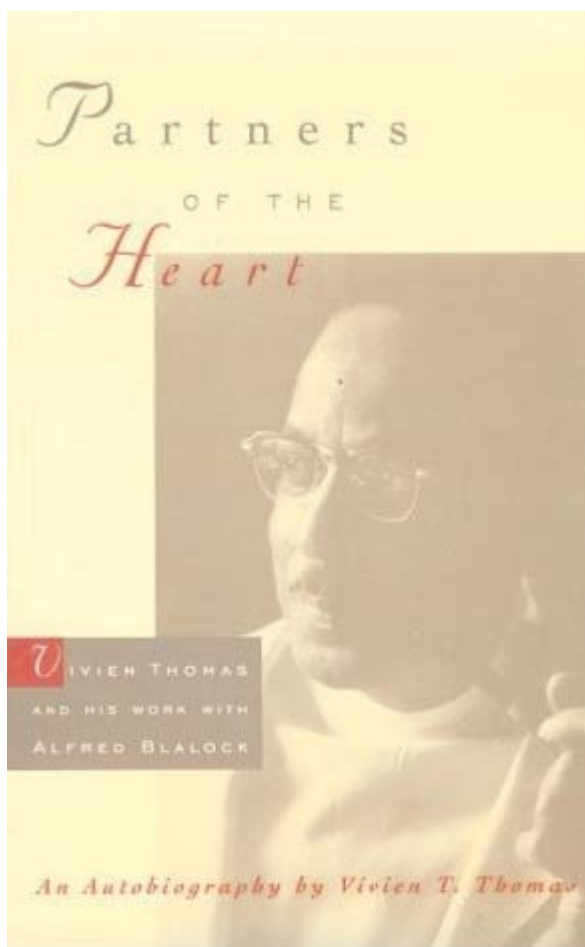


Figure 4. Cover of *Partners of the Heart: Vivien Thomas and His Work with Alfred Blalock*

### *Something the Lord Made* (2004), a television film about Vivien Thomas

#### Technical details

**Original Title:** *Something the Lord Made*

**Country:** USA

**Year:** 2004

**Director:** Joseph Sargent

**Music:** Christopher Young

**Screenwriter:** Peter Silverman and Robert Caswell

**Cast:** Alan Rickman, Mos Def, Kyra Sedgewick, Gabrielle Union, Mary Stuart Masterson and Charles Dutton.

**Color:** Color

**Runtime:** 104 minutes

**Genre:** Drama

**Production Companies:** Home Box Office (HBO) and Nina Saxon Film Design

**Synopsis:** This is a biopic about Vivien Theodore Thomas in which special attention is paid to his relationship with Dr. Alfred Blalock and his contributions to the field of heart surgery.

**Awards and nominations:** This movie won three Emmy (2004), for Best Made for Television Movie, Best Cinematography and Best Single-Camera Picture Editing. Six additional Emmy nominations.



Figure 5. Blalock and Thomas interpreted by Alan Rickmann and Mos Def

This film, directed by Joseph Sargent, tells the story that linked Vivien Theodore Thomas (Mos Def) and Alfred Blalock (Alan Rickman) (figure 5) who, within the framework of southern segregation in the United States in the forties- challenged the rules of the times to produce a medical revolution. Joseph Sargent has also directed very interesting biopics for the television, some of them addressing medical issues.

The story is seen from the perspective of Thomas. The plot focuses on the toils and troubles that Dr. Blalock, a white, well-off Chief of Surgery at

Johns Hopkins University, and his laboratory assistant, a poor skilful black carpenter and surgical and research assistant, have to contend with to develop an unprecedented surgical technique to solve the cardiorespiratory condition affecting “blue babies”. Although they formed an excellent team and became good friends, both occupied very different echelons in society. Thus, while both were opening a novel, progressive field in medicine with open-heart operations, social pressures threatened to stifle their creative pioneer spirit and they perturbed their friendship. The film follows the actual lives of Blalock and Thomas quite faithfully.

The setting of the plot is one of clear discrimination against blacks, as seen in the institutional attitude of Johns Hopkins University. The contributions of Thomas to the development of experimental and instrumental surgical techniques are clearly reflected. However, the faculty members, including Blalock, failed to pay heed to his intellectual acumen and persisted in their discrimination. The development of the personal relationship between both, in which they considered themselves equal, and institutional recognition were not only fruit of the circumstances but also of social evolution. The acting by Dr. Helen Taussig (Mary Stuart Masterson), the founder of paediatric cardiology despite her dyslexia and later deafness, is outstanding.

### ***Partners of the Heart* (2003): a documentary for television about Vivien Thomas**

#### **Technical details**

**Original Title:** *Partners of the Heart*

**Country:** USA

**Year:** 2003

**Director:** Andrea Kalin

**Music:** Joseph Vitarelli

**Screenwriter:** Andrea Kalin and Lou Potter.

**Cast:** Beau James, Chris Haley, Jane Leuders and John Dryden.

**Color:** Color

**Runtime:** 60 minutes

**Genre:** Documentary and Historical

**Production Companies:** Duke Media and Spark Media Inc.

**Synopsis:** This is a documentary about Vivien Thomas; his contributions to science, and his travelling companions Dr. Alfred Blalock and Dr. Helen Taussig and social environment of all of them.

The film is one of the chapters (of a total of 81) of the television series entitled *The American*



Figure 6: Partners of the Heart

Experience, which addresses different aspects of North American History and its contributions to society. It bears the title of Thomas' own autobiography (figure 6).

### **The African Gardner**

Hamilton Naki (figure 7) was born on 26 July 1926 in Ngcingane, a small village close to Centani in Transkei (South Africa).

He finished primary school there and at the age of 14 hitchhiked to Cape Town in search of work. He managed to get a job as gardener at the University of Cape Town, where for 10 years he tended the tennis courts and gardens of the University.

Even though Robert Gotees, from the School of Medicine, sent him to look after laboratory animals, where he soon became involved in anaesthesia, surgical procedures and post-surgery care of the animals, he was unable to study medicine and was excluded from the surgery theatres during apartheid times (only whites could attend).

When Dr. Christian Barnard, an opposer of apartheid, returned from the United States to set up



Figure 7: Hamilton Naki

cardiac transplantation techniques, Hamilton Naki enrolled as his assistant and contributed to the development of those techniques.

It was Naki who extracted from the donor's cadaver the first heart for transplantation in the recipient, the dentist Louis Washanky, in 1967 and he did so as a clandestine surgeon since he was prohibited from operating on patients or touching the blood of whites.

Likewise, with no recognition whatsoever he gave due instruction to thousands of surgery students. Moreover, in a PR photo in which he appeared by mistake next to Barnard, he was identified merely as a smiling gardener. In later years, Barnard praised his role of teacher and his surgical skills. Even though he only figured as a gardener on the payroll of Johns Hopkins, he received the salary of a skilled laboratory technician, the best anyone without a diploma could hope for.

He was allowed to operate and deliver lectures to medical staff until he retired. Before his own death, Barnard himself admitted that "Naki probably has better technical skills than I do".

Naki used such knowledge to train more than 3000 future surgeons. He would spend his lunch breaks reading the Bible to the poor in the local cemetery, warning them about the dangers of alcohol and marijuana.

Naki retired in 1991 with a gardener's pension of 275 dollars per month. During his retirement years, he adapted a coach as a travelling clinic for his surrounding area and sponsored a school in Eastern Cape with donations received from physicians that he himself had trained.

After the end of apartheid, in 2002 he received the honorary awards of Magister Scientarum in Surgery at the University of Cape Town, and in 2003, from the hands of President Thabo Mbeki himself, he was awarded the Order of Mapungubwe in bronze, one of the most prestigious South African awards. In 2005, shortly before his death and when Mbeki delivered his presidential speech to the South African Parliament, Naki was one of the guards of honour.

He died of a heart attack on 29 May 2005 at the age of 78. He never complained about the injustices he had suffered along his life. And although he has highly been praised, his recognition was never on

a par with that of Vivien Thomas<sup>5-7</sup>.

### ***Hands of a Forgotten Hero, a documentary under way.***

The South African Ad-Sera Productions aims to produce a 52-minute documentary for television about the life of Hamilton Naki under the guidance of director Dirk de Villiers: it is entitled *Hands of a Forgotten Hero*. For film this, the film company Wingaudrium Leviosar productions received funds from the National Film and Video Foundation of South Africa in 2003-04<sup>8</sup>.

### **Final remarks**

A black carpenter and a black gardener, both in hostile surroundings owing to racist issues, overcome the adversities of their times, strive to improve their skills, and manage to equal and sometimes surpass the scientific acumen of their white peers. Their careers are exemplary and the films establishing the links between medicine and the cinema in these parallel lives, each with own their dose of human grandeur and human perversity, are good watching for both students and professionals in the health sciences, in particular, and the public at large, in general, and should be debated as regards their academic, ethical-moral and humanitarian aspects.

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