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FOUNDERS

Jaime Celestino da Costa, Master and Man of Culture

(1915-2010)

Professor Jaime Celestino da Costa was one of the most outstanding figures in 20th century Portuguese Medicine and Surgery. He belonged to a select group of individuals who stood out in our country for their intelligence, culture and outlook on problems. Endowed with great intelligence, a solid preparation, and vast culture, enlightened and well-travelled, lover of the arts in their various forms – literature, painting, music that he also performed – and still an expert in horsemanship - he was an excellent surgeon, a born organizer and a remarkable teacher. All these aspects coexisted without conflict, but complemented and enriched each other, to form his personality. Add to these an indisputable physical presence, an unquestionable authority, a developed critical spirit, a great capacity for resistance and reaction to adversity. But there was also a very human side to his relations with patients, co-workers, friends and family.

I had the privilege of working with Professor Celestino da Costa for more than 45 years - I was his student, his resident and his assistant, both at Hospital de Santa Maria and at the Faculty of Medicine in Lisbon. After his Jubilation, he still tutored my PhD Thesis and he was a juror on my Aggregation Exams.

This relationship resulted in immense admiration and deep affection. The Teacher was my Master but he was also my Friend. And him having recognized me as his disciple and having distinguished me with his Friendship filled me with pride and gratitude.

Professor Jaime Celestino da Costa was born in Lisbon, on September 16, 1915, in a family of great



Figure 1

Professor Celestino da Costa at his office at Hospital de Santa Maria.

“The true Message from the Master goes beyond “the things” being taught. The true Message is contained in his attitude regarding life, regarding teaching, regarding Science, in that milieu representing, to his disciples, the emotion of a lived-through experience and a visualized ideal”

(J. Celestino da Costa. Educação cirúrgica, Gazeta Médica Portuguesa VII,1, 1954)



Figure 2 Professor Celestino da Costa in 2007.

intellectual and cultural importance. After attending High School in Liceu Pedro Nunes (1925-1932), he enrolled in the Faculty of Medicine in Lisbon, in Campo Santana, recently created in 1911 by the young Republic, associated with the School Hospital of Santa Marta. This Faculty was at that time going through its "European phase". Professor Celestino da Costa graduated in July 1938, with a final average of 18 values. In October of that year, he entered Public Examination Contest for the General Residency in Hospitais Civis de Lisboa and there he also did the Residency in Surgery.

THE SURGEON

Since childhood, the Professor had wanted to be a Surgeon; he couldn't explain why, there was no surgical tradition in his family (his father was a scientist, a man of laboratory and his mother from a family of musicians). "Perhaps because I liked to work with my hands, to execute" considering, as he said later, that Surgery was an art of "interpretation/execution" of the kind that "are conceived with the head and they are performed with the hands" ¹.

After his graduation, in 1938, he prepared himself for a clinical activity that he always desired to be academically based. He performed his professional activity simultaneously as a Surgeon and as a Professor and dedicated himself to both academic and hospital careers,

to which he called a pedagogical career and a professional career, with the same commitment and standing out in both (Table 1).

If it was at the Hospital de Santa Marta next to his teacher Reynaldo dos Santos that Professor Celestino da Costa found the most solid base of his surgical education, it would have been as a Surgeon at the Emergency Department of the Hospitais Civis de Lisboa where he acquired an extraordinary experience. His multiple trips abroad from 1947 onwards, especially to England, complemented his formation in an irreplaceable way.²

Prof. Celestino da Costa was not a surgeon-operator, and despite being a skillful and confident performer, he did not cultivate technique for technique's sake. He was a surgeon "of indication", like his Master Reynaldo dos Santos, with an undeniable instinct in diagnosing and an intelligent, imaginative and judicious operative decision – an interpreter before executor, because "from the interpretation derives particularly the surgical indication"³ – and that execution was guided by a thorough evaluation and a guiding principle.

His Concept was that of a humanized Medicine: despite being a defender of new practices and favorable to technological progress, the Professor however regretted the misuse made of some techniques, the loss of vision of the whole, and above all the fading of the doctor/patient relationship, as he had understood it and had always lived it. Medicine loses "its humanistic feature, becomes dehumanized, and approaches a technological routine, where medical ethics itself is diluted"⁴. "Medicine is a sui generis profession, with many faces. It has a complex concept: it is humanistic in origin; it is humanitarian as an action; it's scientific in its training; it is biological like matter; it is a superior type of education; it's professional as an activity; it is solidary as a vocation; it is ethical as a conduct and it is altruistic in its designs"⁵.

THE HEAD OF DEPARTMENT

The Surgical Propaedeutics Department in Hospital de Santa Maria was the first one he directed. Always concerned with surgical teaching and training, he writes in his 1961 Curriculum: "We wanted to establish a doctrine of teaching and conduct which would allow us renewal and airing of so many anachronistic aspects of our medical education.

We based ourselves on this doctrine when creating and organizing the Surgical Propaedeutics Department at Hospital de Santa Maria. The doctrinal aspect and certain facets of the Service's own action are condensed in a group of works published..."

He twice presented and published the results of interventions in the Department: "Surgical teaching and training" in 1961 and "An experience of medical education" in 1969. In these publications he exposes his ideas about

**Figure 3***At the piano in his office.*

what a modern department should be, how he conceived the Surgical Propaedeutics Department: fewer beds than usual (but what counts is the profitability from these), a 6-bed operating room equipped with specialized nursing staff (the only one of its kind in Hospital de Santa Maria for many years), an archive with an organized classification system, observation norms and registration for each pathology ("guidelines"), and many other organizational specificities. There was additionally a Library, side by side with its office, with its magnificent shelves and the large central table, around which we gathered on Saturday mornings, to classify the clinical files, discuss some cases, make the next week's operation program and see the operation picture slides, after the ward round. A minor surgery operation room, an endoscopy room and a radiology room completed the Department installations. A Clinical pathology Laboratory had also been planned.

In 1974, he moved with his service team from the 3rd floor of Hospital de Santa Maria, for the facilities of Surgical Pathology Department on the 8th floor. These were large but degraded wards, side by side with the Cardiology Department, and Professor Celestino da Costa planned to develop, in addition to a General Surgery Department (Surgical Pathology), a Cardiothoracic Surgery Department. He assumed the Direction of Medical-Surgical Cardiology in 1970, and in 1979, he was appointed as the Head of the Cardio-Thoracic Surgery Service, created in the meantime (Table 1).

THE TEACHER AND EDUCATION / THE PEDAGOGICAL CAREER

In 1941, he began his academic career as an Assistant in Operative Medicine and Surgical Anatomy (with Professor Virgílio de Moraes), after Public Exam Contest, having transited in 1944, at the invitation of Prof. Reynaldo dos Santos, to Assistant in Surgical Pathology and Therapy. From that same date until his nomination for Extraordinary

Professor in 1951, he would work in Santa Marta Hospital, in his Master Prof. Reynaldo dos Santos' Department, for a few years that he considered fundamental, "illuminating" as he would say. However, he is simultaneously continuing his "scientific learning" in several of the Faculty's Institutes (Histology and Embryology, Anatomy), at the Curie Foundation in Paris, which he attended as a scholarship holder at the French Institute and still in the Instituto Português de Oncologia⁵. Several research works in Endocrinology and Angiology date back to this phase, and with the support of Reynaldo dos Santos and Augusto Celestino da Costa he set up a small Experimental Surgery laboratory of in a corner of the Faculty's Histology Institute. He obtained his doctorate on July 29, 1945, at the age of 30, with a thesis entitled "The arterial wall. Outline of an analysis of the normal arterial wall and some of its experimental modifications". The Thesis was prefaced by Prof. Reynaldo dos Santos, who classified it as a "beautiful work of experimental investigation, cleverly conceived and methodically and technically well executed".

In 1946, he became First Assistant in the Surgical Pathology chair and in 1947, he was transferred to the Clinical Surgery chair, accompanying Prof. Reinaldo dos Santos. In 1948, still as first assistant, he was in charge of the annual Surgical Propaedeutics Course.

In 1951, he took part in the competition (always involving public exams) for the position of Extraordinary Professor of Surgery. But as a Professor, he didn't have a Department in Santa Marta Hospital and it was in Hospitais Cívicas de Lisboa where he exercised his surgical activity, taught his students and prepared new surgeons.

In February 1962, he was approved for Full Professor of Operative Medicine; his Lesson - Surgical Therapy of Congenital Heart Defects. Hypothermia and Extracorporeal Circulation, had a huge impact on the academic environment of the time. Unfortunately, it was never published, leaving us only a detailed plan. In the same year (1962), he was transferred to the Chair of Surgical Propaedeutics. Later on, he became Professor of Surgical Pathology (1973) and of Clinical Surgery (1977) and in charge of the Surgery III and Cardio-Thoracic Surgery Courses (1976).

Of the various courses he taught, Professor Celestino da Costa kept a specially grateful memory of the first one he was in charge of - the Surgical Propaedeutics: "I will not forget... the pleasure I had in giving Surgical Propaedeutics to my students. I entered teaching through that door"⁶. In the first class of this first course⁷, he began by exposing the principles and orientation of the Course, which he understood should be a true "Introduction to Surgery". We already recognize many of the ideas that he will develop throughout life: the importance of training along with information, critical to courses that are too heavy and theoretical, the idea that students should "live the life of the wards actively" and not just having a few hours of practical classes in the morning, in order to learn through direct contact with patients, to think that the


Figure 4

Riding his "Hioral" horse in "piaffer".

Medicine course was too long; the importance an internship and a final thesis, and that the Medicine degree should be condensed the last 3 years into 2, and the attempt to convince students that medical books are to be consulted and not to be decorated and parroted.

The Professor gave brilliant and extremely didactic lessons, simple and clear, making them easily understood by students. The weekly theoretical classes, at 8 am, were always full and students followed them with enthusiasm. In a time when the current audio-visual means did not exist (and I recall that Prof. Celestino da Costa proposed to create an audio-visual center attached to the FML, in 1973, which would not come to fruition), the Professor's lessons had at most an old slide projector, so he illustrated the lessons by drawing on the chalk board. Which one of us forgot his doodles explaining the anatomical concept and the physiological concept of Surgery, Claude Bernard's "milieu intérieur" or Cannon's Homeostasis? He carefully organized the program for the whole year, changing and modifying it, as he saw fit, instructing his assistants (following the example of Prof. Reynaldo dos Santos) and also colleagues from other institutions, to give some classes on subjects in which they were specially prepared.

The lessons themes were actual, treated in the light of recent knowledge. The first class from the 1964-65 course (the one I attended), in which he explains what he means by "surgical terrain", has been published, as well as the inaugural lecture of the Course of Medicine Operatory, from 1961, entitled "Why Farabeuf?" that by its sharpness, its irreverence and merciless attack on the retrograde spirit of certain surgical teaching strongly shook the students and outraged many faculty members. Another of his lessons, on "Thoracic Injuries" (1946-48), in which injuries and their consequences were explained based the pathophysiology of the chest, were a "best-seller", several times sold out and re-edited, and were studied by countless generations. Later, as an Faculdade de Medicina de Lisboa Assistant, I again attended many classes given by the Professor with the same delight that I had felt as a 4th year student at the Faculty.

In the other disciplines he conducted – Surgical Pathology, Clinical Surgery, Surgery III and Cardio-Thoracic Surgery – he always had the same care. In his final years, however, his experience as a teacher in pre-graduate setting, brought him some disappointments, in contrast to the enthusiasm and joy of the early days. By then he felt happier and more fulfilled in his contact with young doctors and groups of nurses and technicians, preparing the future nurses of the Recovery Unit and latter of the Cardiothoracic Surgery Department.

But Professor Celestino da Costa did not limit himself to innovating in pedagogical matters, in organization of the course or the Service he directed. He had his own very definite ideas on the Teaching of Medicine in general, the Faculties, the University, the Hospital Schools, of which he was always a staunch defender. This was one of his constant struggles.

THE MANAGER

Cardiac Surgery

It was in 1948, precisely the year in which the Professor attained the post of Hospital Surgeon, where cardiac surgery was born, still with a closed chest. Attracted by the big challenge it represented, dissatisfied with the situation in our country, convinced that it should exist where there is a great surgical tradition and in an University Hospital, Prof. Celestino da Costa started in 1951 a fight that would last all life. Still in the Hospitais Civis de Lisboa in the Hospital of D. Estefânia and later in the one of Desterro, he operated on his first cardiac patients: pericardial surgery in 1951, mitral valve stenosis and ductus arteriosus in 1953. In the phase that preceded his transfer to the Hospital de Santa Maria, he had prepared the Surgical Propaedeutics operating room for Thoracic Surgery. After overcoming many obstacles, he created in the Surgical Propaedeutics Department a "Cardiac Surgery Center" (1959) - with the indispensable support from the Gulbenkian Foundation-, where "in addition to "closed" heart surgery he was already performing at the time, he prepared for open cardiac surgery, with moderate hypothermia, which for the first time was practiced among us in the early 60's. Cardiac surgery with extracorporeal circulation began simultaneously at Hospital de Santa Marta and Hospital de Santa Maria."⁸

To update his knowledge, discover new methods and equipment, the Professor made a series of trips abroad, many in the company of Manuel Machado de Macedo.

The Cardiac Surgery Center evolved into the Medical-Surgical Cardiology Department in 1969-70, with the transformation of the Cardiology Department to a "combined medical and surgical unit for cardiac surgery", whose idea was picked up in 1968, in a Joint Cardiology Committee report and performed in collaboration with Prof. Sequerra Amram. In 1972, he created, next to the Operating Room, an Intensive Care and Recovery Unit,

with 3 beds, which constituted a significant progress (initially, the operated patients spent the first hours of their postoperative period in the operating room, supervised by surgeons) and was the first of its kind in Portugal.

Despite all the difficulties and misunderstandings he often suffered, there was a lot of innovation in his action: "I know it was at the Cardiac Surgery Center of Santa Maria Hospital where the first open-heart surgeries in Portugal were performed⁹, including the first pulmonary valve tightening, the first subvalvular aortic tightening, first isolated atrial septal defect and with partially anomalous venous return, for example, as well as the first intracavitary tumors and the first thoracic aneurysms, and some unprecedented forms of therapy were performed, such as the first open Brock's operation if Tetralogy of Fallot".

In 1979, the Cardio-Thoracic Surgery Department was inaugurated, in whose conception, construction, equipment and organization, the Professor had once again toiled from the beginning. The inauguration of the new Service was preceded in May 1978 by the "1st Course on Thoracic Surgery for post-graduates", which the Professor carried out at the Gulbenkian Foundation and which had as foreign guests E.S. Zerbini, W.P. Cleland,

Charles Hahn and D. Bregman. Another interesting aspect was the creation, in 1979, of an obligatory Cardio-Thoracic Surgery semestral course, with a "previously posted and rigorously complied with" program.

But despite his efforts and the coming of the London Surgeon Stuart Lennox in 1980, he was unable to get coronary surgery started and routinely practiced in Santa Maria. The new dedicated Operating Room, the new Intensive Care Units that he conceived and planned would unfortunately only be ready after his jubilation.

Hospital organization and Emergency

Professor Celestino da Costa recognized the role of Hospitais Cívicos de Lisboa in training surgeons, and knew everything he owed to that Institution and to the School represented by the Emergency Department (ED) of the São José Hospital. He was however very critical about the organization of that same ED and the Urgency in general, as well as the importance given to it and its role in Hospital Organization and Healthcare. He highlighted the lack of competence and specialization, the absence of pre-hospital triage, the admissions on the basis of geographic implantation and not by areas of medical knowledge and

Table 1

Year	Hospital career	Academic career (FML)
1938	General Residency at Hospitais Cívicos de Lisboa (HCL)*	
1940	Surgery Residency at HCL*	
1941		Operatory Medicine Assistant*
1944		Surgical Pathology and Therapeutic Assistant
1945		Doctorate degree
1946		Surgical Pathology 1st assistant
1947		Clinical Surgery 1st assistant**
1948	Tenure Surgeon at HCL*	Surgical Propaedeutics Course Director
1951		Extraordinary Professor of Surgery*
1953	Vice-Diretor of Emergency Department at HCL	
1958	Surgical Propaedeutics Department Director Hospital Santa Maria (HSM)	
1960	Coordinator of Residency at HSM	
1961		Cathedral Professor of Operatory Medicine*
		Cathedral Professor of Surgical Propaedeutics**
1966	Emergency Department Director at HSM	
	Member of the Technical Counsel HSM	
1972	Clinical Director at HSM	
1973	Surgical Pathology Department Director at HSM**	Cathedral Professor of Surgical Pathology**
1976		Surgery III and Cardiothoracic Surgery Course Director
1977		Cathedral Professor of Clinical Surgery**
1979	Head of Cardiothoracic Surgery Department at HSM	

* Public Examination

**Transference

a wrong articulation between Outpatient Clinics and ED.

These considerations led him to make several proposals for improvement, with schemes to support, in lectures and articles such as "The problem of urgency in hospital organization" (1959), or "The Emergency Service – Past, present and future" (1989). It should be noted, in his opinion, the priority that should be given to Outpatient Clinics in the admission of patients to hospitals instead of the admissions through the ED (still a very actual problem), and the frequent reference to the need of a pre-hospital care network, aimed at "domestic medical care" (now mirrored in the Home Health Care programs multiplying in Portugal and all over the world).

Trauma was another topic that worried him and was at the origin of many of his interventions, either from a clinical point of view (Chest injuries, Evaluation and behavior in the polytrauma) and from a conceptual and organizational point of view. He planned extensively for a Traumatology Centre, to be built at Hospital de Santa Maria, or after the 25th April 1974, in the future Hospital de Santa Cruz.

"I made a huge effort so that in Santa Maria – and in other hospitals – Casualty services were created. In Portugal, we do not have a service dedicated to those patients who need special direct entrance to the ED and Multidisciplinary care"¹⁰

Interventions and publications

These concerns were recurrent themes in the presentations and publications of Professor Celestino da Costa. He published and presented more than 250 papers related with Medicine. His first articles (starting in 1941) in his research and experimental surgery phase, were mainly on Endocrinology and Angiology. In the 1950s, Portal Hypertension originated several papers on pathophysiology, diagnosis and surgical treatment. In the 1960s, writings on pathology and clinical practice were mainly focused on (but not exclusively addressed) cardio-thoracic themes.

A genre also cultivated by Professor Celestino da Costa was that of biographies, justified by the importance he attributed his own Masters. But it is in his texts on Medical Education and Philosophy of Medicine, History of Medicine and Emergency, that we better find his thoughts on the topics that most concerned him.

After his retirement, the Professor continued to write and I cannot fail to mention "Training of a Surgeon" and "A Certain Concept of Medicine", fundamental pieces of fascinating reading for those who want to know the contemporary history of our Medicine and Medical Education, and indispensable to any serious reflection on the state of Healthcare in Portugal.

The Humanist and the Man of Culture

To limit the evocation of Prof. Celestino da Costa to his professional achievements and pedagogical characteristics - of surgeon and professor -, gives us a reductive vision of

his personality. It is essential to appreciate him also in his human and cultural dimension. His Farewell Lesson, in 1985, headed by a quote from the *Essais* by Montaigne ("Je veux des têtes bien faites et non des têtes bien remplies", concluded like the following: "If we desire a society where justice and human solidarity prevail, we will have to conceive it from the individual point of view. Individuals should be given the power and opportunity to realize themselves in an almost original way, we would say, and also in a creative way....

For these reasons, we advocate a return to individual human values, to respect for personality, to the encouragement of diversity, to recognizing identity, integrated into a purified natural environment: human values that our clinical experience showed us and the experience of artistic "performer" revealed to us. The arts, the authentic arts, better than any other form of communication – because they use an international language and because they are not progressive – keep values untouched: they keep men attached to their true origins, spiritual and cultural."¹¹

Let us recall Celestino da Costa's taste for reading, which began in childhood, in his father's plentiful and diverse library, his pleasure in traveling (on his first big trip, in 1940, he spent 3 months in Paris, chaperoned by Orlando Ribeiro), his interest in the arts (the "study visits", excursions guided by Mário Chicó to Alcobaça, Batalha, Caramulo, Portalegre... "because it's not just going into the nave of a church and to look. You have to know how to see.")¹².

He traveled abroad practically every year ("October was my traveling season", he would say), having enjoyed unforgettable experiences a few times in Reynaldo dos Santos' company.¹³

He also made frequent study and updating travels abroad. A big admirer of the United Kingdom, where he did his most modern apprenticeship, and of the USA, with its technical development and its organizational capacity, it was in France he had begun his scientific knowledge updates, especially in Paris, in the post-war. And as far as culture was concerned, he was an undoubted lover of France and its artistic wealth. Two of his hobbies are well known: music and equestrian art. Having been born in a musical environment, since he was a little boy he listened to music and practiced it. Its "ability to musical auditor never suffered interruptions" but the same did not happen with his "active amateurism", which he had to abandon in the "hardest phase of his professional training". In the early 1950s, however, he started learning again, practicing daily on his piano. His musical references were: "J.S. Bach as perennial influence; Robert Schumann as Passion; Gabriel Fauré as devotion"¹⁴. He learned to ride at an early age and acquired great mastery in the equestrian art in his youth. He had to interrupt this practice for a while, but he soon started to assemble the following the competition for Full Professor and continued until the age of 80.

Professor Celestino da Costa was a strong personality, with firm ideas, with recognized qualities of a leader, as proved in difficult moments lived in the Medical

Faculty and in the Hospitals where he worked.

A man of culture with a broad view of the world, he was an extraordinary teacher, a tireless organizer and a great Surgeon. He was the undisputed Master of several generations of General Surgeons, CardioThoracic, but also from other specialties. "It's something I like to talk about and of which I'm very proud of. I helped to form a large group of surgeons, who are both in Lisbon Hospitals and in Hospitals in the south of the country... I had a great concern for medical education and I thought that it was a priority to train competent people with a renewed spirit in surgery."¹⁵

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