

INTRODUCTION

Professor Frances Ames (1920–2002) is teaching neurology to fifth-year medical students in the Falconer Clinical Lecture Theatre on the fifth floor of Groote Schuur Hospital in Cape Town, South Africa. One hundred-odd medical students are seated in an amphitheatre of tiered seats to witness the drama being played out below them by their teacher and her patient. Frances wears a long white coat and her silver hair flows down to her shoulders; free and natural. She is simultaneously serenely beautiful and uncompromisingly serious. It is 1985 and we are in a State of Emergency declared by Pieter Willem Botha's white-minority apartheid government in response to countrywide 'civil unrest'.

She has a patella hammer in her hand to elicit neurological reflexes, but at times it serves also as a pointer, a conductor's baton, or a magician's wand. A patient in a hospital gown that closes up at the back lies on a trolley in front of the arc of students. He has multiple sclerosis, a condition that has made him an 'excellent teaching case'. The class settles unusually quickly after the briefest introductory scene-setting, and is soon spellbound. Frances demonstrates several neurological signs with the fluency that makes watching a skilled neurologist in the flow of a clinical examination more akin to a poetry or a dance lesson than a demonstration in clinical medicine.

Despite the hundred souls focused on the barely covered patient, the story unfolding below is a precise counterpoint to any form of voyeuristic theatre: this is an ancient and universal, archetypical ritual; a nexus between the physician as apprentice, the physician as master craftsman, and the patient as teacher. It echoes back to Queen's Square in faraway London; and to the spiritual home of modern neurology, the famous Salpêtrière Hospital in Paris [where Joseph Babinski [1857–1932], from a Polish émigré family, is said to have been the favourite student of the great father of neurology, Charcot, himself]; and still even further back, all the way to Leonardo da Vinci, Avicenna, Galen, Hippocrates, and the ancient Egyptians.

As she explains the clinical signs to us, Frances all the time quietly gentles the patient, reassuring him about certain aspects of what she is saying and doing, and thanking him for helping her to teach the



Joseph Babinski (1857–1932). Photograph by Eug. Pirou, Paris. Credit: Wellcome Collection. CC BY. <https://wellcomecollection.org/works/nkzn4k2r>.

students, so they can become 'the doctors our kids will one day need'. Her hands seem to touch him and then hover above his body as she is perpetually scanning her patient with more meaning than any magnetic resonance imager.

BABINSKI'S SIGN AND THE DEATH OF STEPHEN BIKO WHILE IN POLICE CUSTODY

'Eliciting Babinski's sign is one of the most important clinical manoeuvres in neurology, and therefore in clinical medicine. It reliably differentiates a corticospinal lesion from a lower motor or peripheral nervous system lesion. Babinski's sign is positive when, after scratching the outer aspect of the sole of the foot, the big toe's initial movement is upwards. This is how you elicit Babinski's sign.' [All quotes are based on the author's memory of the event as it happened.]

Magician-like, she produces a bunch of keys from the pocket of her long white coat, selects one, and then, while firmly gripping the patient's shin with one hand, she decisively, yet gently, strokes the sole of the patient's foot with the key held by her other hand.

We all see that the first tiny, involuntary movement of her patient's big toe is clearly upwards, even though the toe subsequently curls downwards.

The students are perfectly still, almost forgetting to breathe, all aware of the significance of that upward twitch that is more or less imperceptible to the untrained eye. But now, with our own eyes, we have just seen deep inside this patient's brain.

Frances elaborates further on the

importance of this clinical sign by providing a local and topical clinical example:

'If the doctors assessing Stephen Biko, while he was being tortured in detention without trial by our security police, had done any meaningful clinical examination, they would have taken particular note of Babinski's sign. It would have told them immediately that Biko was not malingering as claimed by Dr Liang, the local police surgeon. It is physically impossible to feign a positive Babinski's sign.'

'Dr Tucker's assertion that Biko's neurological status had not changed while he was in the care of Colonel Goosen could only have been based on an assessment of his patient that did not include eliciting the plantar reflex. Babinski's sign would have told them categorically what was wrong with Stephen Bantu Biko, and the implications for urgent care would have been inescapable. But instead of urgent hospital admission, he was thrown naked and handcuffed into the back of a police van and was driven 1000 kilometres to Pretoria where he died alone in a prison cell.'

'Firstly; always, wherever you are, and whatever kind of medicine you are practising, pay your patient respect by giving them a proper physical examination; never leave the consultation without having laid hands on your patient. They deserve nothing less, especially if they are manacled, lying naked and unconscious on the floor of a police cell. Take very careful note of context, but don't be unnerved by it. Your first duty is always to your patient.'

'Secondly; never forget the proper place of Babinski's sign in the clinical examination of your patients.'

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DOI: <https://doi.org/10.3399/bjgp19X706793>