

## Fred Plum (1924-2010)

Fred Plum died on June 11, 2010 and on this date Neurology began to mourn the passing of one of its great figures of the 20th century. A man possessed of some extraordinary talents and drives, he will be known in perpetuity for his studies on the diagnosis and understanding of coma but it is quite possible that his most enduring legacy will be measured by the success of his trainees. He was a stern task master who got the best out of people, although it has to be said that they did not always recognise it at the time nor did they necessarily enjoy it. Fred was easily pleased – by your very best effort – although that wasn't necessarily good enough – and there was rarely any acknowledgement that you had tried your hardest. For most it became second nature that excellence was only par on Fred's course. However, on numerous occasions he was caught stealthily praising individuals behind their backs.

He had a very clear vision of the role of the academic neurologist in patient care, clinical research, and fundamental research and within neurology there have been few better exemplars in taking problems from the bedside to the bench and back again. He was the academician whose skill set residents wanted to emulate. His research career focussed on cerebral blood flow and metabolism, naturally arising out of his interest in medical coma but he was a neuroscientific omnivore and made important contributions to stroke and degenerative diseases. There was a wonderful synergy between Fred and Jerry Posner on several levels and it was an enduring and productive collaboration. Their early days included several heroic episodes of self-experimentation involving femoral artery and jugular venous catheterisation, and continued hyperventilation for four consecutive hours which was sufficient to produce a death wish in the otherwise imperturbable Posner. These and other philanthropic activities would have made John Hunter proud.

Fred had the capacity to be sharp-tongued, indeed sometimes withering in his critiques. There was no question however that trainees were well advised to stand up to him. It also became clear though not intuitively obvious that he very much wanted you to. He much savoured the give and take of matching wits and his part could be misinterpreted as bullying, not that he was incapable of it. When it finally happened that you were right and he was wrong – the unholy grail sought by all trainees – mostly unsuccessfully I might add, he seemed to visibly relax at the achievement of a milestone he had set and the trace of a smile might be seen.

He was generally a good loser in a scientific dispute but he could well afford to be, as it happened but rarely. He was usually fair-minded but preferred changing his mind to being convinced by arguments. I cannot imagine trying to convince him of the value of making everyone feel good about themselves and extolling the mediocre. He did have difficulty with some of his neurologic progeny, not unlike the usual tension between fathers and sons, insofar as he had a very strong sense of hierarchy and one's place in it was not something that Fred felt required much exploration or negotiation. This was a time and place where

doing a superb job was insufficient for comment and yet somehow regardless of how it sounds, it worked. Fred's department was a “no fishing” zone when it came to compliments and I am not at all sure anyone felt that good about themselves, although if anyone did it was Fred. His first name in a neurological context became a unique identifier much like it can be for Brazilian soccer stars.

Presenting cases at Rounds was no less stressful for visiting speakers reporting their recent research than it was for Residents. He was an extremely careful listener and he would immediately pick out what did not fit a hypothesis. He hated circumstantiality and would cut you off if you rambled. If you gave irrelevant detail he would call you on it and tersely explain that he was not able to incorporate irrelevant facts quickly. It certainly sharpened your own cognitive organisation. It was not his style to try to hammer a square peg into a round hole and he was brilliant at detecting the one irregularity which made the fit uncomfortable. But sometimes years later it would become clear he had taken note and he remained on the prowl for that appropriately sized round hole which might even be for your peg.

I recall being at an anniversary celebration for his department held at the UN a couple of decades ago. It was startling how many successful neuroscientists and neurological administrators had come out of Fred's program. There was a certain sense of camaraderie that was undeniable, not entirely unlike that reported among survivors of prisoners of war camps or lucky escapees from natural disasters. One speaker publicly asked the question of how it was that Fred engendered such success among his neurological offspring. He went on to ascribe it to Fred's judicious use of the carrot and the stick. This provoked some incredulous queries among the former trainees as to the nature of the carrot, as few Resident-helots could recall any perks of any kind for that matter. It was duly concluded that Fred's Spartan carrot was the absence of the stick. Lest this paint too gloomy a picture of the way things were, it has to be said that there was engendered a remarkable *satisfaction de vivre* if not actual *joie* and a sense that we could do it better than anyone else. I have no idea if he read Nietzsche but the unspoken ethos of “that which does not kill you will make you strong” prevailed. There was nothing maudlin about Fred as a source of inspiration, it was primeval, based on competitive urges and the wish of juniors, selected for precisely this attribute, to outwit and surpass the teacher. No one could elicit these urges better than Fred and he and Jerry turned out trainees whose confidence was surpassed only by their competence.

Fred was the quintessential New Yorker in many respects and took advantage of all that NY had to offer. He was consulted by many dignitaries, politicians and the great and the good. He enjoyed this at least to an average degree and was occasionally overheard to drop a name or two but rarely details. Cornell Neurology was unique in the early 70s in other respects. This department in which neuro intensive care can reasonably be said

to have had its origins was populated by residents who actually sought out cases of medical coma to deliver back to the boss who would approve. Woe betide the unlucky registrar entrained to defer to medical colleagues in lesser departments who foolishly let slip that he had let cases of meningitis, endocarditis, drug overdose and hepatic coma escape his grasp. Fred would be upset if we lost any of these cases to the medical service and was completely convinced that his department could do a better job – and it did. Indeed the neurological nursing and intensive care of patients in coma was something that Fred can rightly be said to have pioneered.

It was difficult to sneak a half-baked idea, a dodgy conclusion or a dubious diagnosis past Fred. It was much like trying to sneak a sunrise past a rooster. Yes, he was scornful and gave the impression he was never completely comfortable in his own skin, and he did take himself too seriously, but he drove an entire department to heights it would never have otherwise achieved and to a degree he upped the game of the entire medical centre. He was a prodigiously hard worker and he could be regularly found in his office at midnight revising and editing papers. “Professor Plum in the library with a candlestick” was what came to mind when I stumbled into his journal room in the early hours to find him there deep in thought.

Had complete intellectual honesty not characterised his approach and had he not had the propensity to be equally critical of himself, his scathing commentaries would have been intolerable. As insensitive as he could be in public to colleagues, there was a remarkable integrity which made his opinion and judgement invaluable and bankable. He was sternly moral in many respects and he expected rectitude from his trainees. He could be disarmingly frank and he might tell a trainee that he would be prepared to provide a reference for one institution but not for another – because the trainee was not good enough for the latter. He was unusual in making allowances for idiosyncrasy which was always trumped for him by merit. He loved to be flattered but I never got the impression he had time for sycophants, and he would become one himself only in the presence of undeniable greatness. He would wince, but was unable to laugh at his own foibles but then again he did not laugh at those of others either.

He despised subterfuge, laziness and could be even cringeworthy hard on colleagues who failed to measure up. Giving Rounds could be a baptism of fire which always had the potential to turn into an exorcism. He was capable of leaving a speaker devastated by a single trenchant critique, whose fallen crest betrayed the uncomfortable reality that Fred’s objection had not only escaped the speaker’s scrutiny but had removed a weight-bearing pillar of an entire argument.

He was unreservedly competitive and had his own view of his place among the greats of his time. He was not the most humble person in the world but despite this, the respect his colleagues had for him never waned. He did not suffer fools, – gladly or otherwise. He travelled widely and formed perceptive and generally accurate opinions of other centres and other national groups. He managed to get through airport security in Canada, post 9/11, without a passport by sheer force of personality even though his speech was beginning to falter. I am in a good position to report that everything he said about the UK has turned out to be correct. The details of one famous CPC at Queen

Square I heard first hand from Fred himself and then found it corroborated by three additional neurologists present at the time.

It was an era when American Neurology and British Neurology were on entirely different tracks. McDonald Critchley, himself no sufferer of fools, was the discussant of a CPC in which a parietal lobe deficit was a prominent feature. A dutiful pathologist reported finding a lesion precisely where it had been predicted. The cloying self-satisfied smiles of approval were a red flag to Fred and in vintage fashion, he raised his hand and pointed out that the “lesion” was immediately subjacent to a burr hole through which a biopsy had been performed some years previously. Critchley was said to have been unamused but I have it on good authority that the pathologist himself who had overlooked this relevant clinical feature had the integrity to convey his marvel at Fred’s shrewdness.

For Fred to have developed primary progressive aphasia was a cruel irony, much like Lou Gehrig’s ALS singling out his bat-swinging musculature to herald its onset. He was precise with speech and the written word, mostly self-taught, and the English grammar (Oxford of course) and dictionary behind his desk were well-thumbed. He became a formidable editor, single-handedly responsible for taking the editorial board of the Archives of Neurology out of the AMA orbit and transplanting it to the new Annals of Neurology which he founded. He did it for pure scientific reasons, unable to tolerate the restrictions to content and timeliness that were cramping his style. The Annals of Neurology has never looked back.

Neurology owes a lot to Fred, as does a legion of former colleagues and trainees but no more so than patients with neurologic disease of all kinds, few of whom will have heard of Fred Plum now. But when Neurology reclaimed the care of the sick and shed its dilettantish image of aloof supercilious diagnosis, the undoubted leader in the 20th century was Fred Plum. He is survived by his wife Susan, children Michael, Chris and Carol and by his professional legacy which spans education, diagnosis, nosology, patient care, research and above all the creation of standards of excellence that will endure.

*GC Ebers  
Clinical Neurology  
University of Oxford*

GE was in the Neurology department at Cornell from 1972 to 1978 as resident, chief resident and lecturer.

#### ADDENDUM

His passing was noted by many national and international papers and a few links are provided below which give a view as to how he was perceived outside of his own circle of colleagues.

<<http://www.nytimes.com/2010/06/13/health/13plum.html>><http://www.nytimes.com/2010/06/13/health/13plum.html>

<[http://www.boston.com/bostonglobe/obituaries/articles/2010/06/14/fred\\_plum\\_advanced\\_study\\_of\\_consciousness/](http://www.boston.com/bostonglobe/obituaries/articles/2010/06/14/fred_plum_advanced_study_of_consciousness/)>[http://www.boston.com/bostonglobe/obituaries/articles/2010/06/14/fred\\_plum\\_advanced\\_study\\_of\\_consciousness/](http://www.boston.com/bostonglobe/obituaries/articles/2010/06/14/fred_plum_advanced_study_of_consciousness/)