## **Prologue**

2013 Eighth International Congress of Clinical Psychology, Granada, Spain

HE PRINTED A3 sheet clipped to a folding stand outside the lecture theatre announced the afternoon sessions.

Shortlist lecture series: Elspeth Dickson Award for New Research Areas

A list of research papers and their presenting authors followed; two investigating clinical depression in relation to other medical conditions, one looking at the mental health issues of repeat offenders, and the final paper was listed as:

Professor Magnus Stephens, Mr Tom Boyand (Consultant Cardiologist, UK – Presenter) and Dr Mike Chu – 'Near-death experience: the collected testimony of 240 subjects.'

Inside the air-conditioned auditorium, steeply sloping rows of folding seats were packed with delegates. Notepads, laptops and phones rested on the slim wooden plinth that curved along the length of each row, ready to record, in their own ways, the salient points of the work being presented. Tom Boyand stood at the lectern, his dark brown eyes looking out across the room. He was tall and slim with a naturally athletic build, more from good genetics than honing in the gym. His hand periodically clicking a dongle to change the PowerPoint presentation up on the big screen.

"...and that, ladies and gentlemen, is our study, which I can summarise as the collection of testimonies from two hundred and forty subjects worldwide, across a number of partner centres, from those whom have had a so-called near-death experience. We defined this as the absence of vital signs capable of sustaining life, and the absence of medical intervention in order to sustain life, for in excess of ten minutes. The data shows that the vast majority of subjects describe a sensation of falling, of being drawn towards somewhere and ultimately a white light and feeling of

well-being. We have concluded that the biochemistry and physiology of cell death – hypoxia, cellular breakdown and associated release of what are effectively toxins to the surrounding tissue – would be the same in every individual, and that these chemical reactions are therefore directly responsible for causing the similar experiences we have found. Our proposals for further work would be to look at blood and tissue analyses immediately on admission to emergency rooms, to study the exact chemical soup that is causing this.' He paused, studying the faces staring back at him. 'You know, ladies and gentlemen, as we can see from our study, most of our subjects have had the same experience. By defining the chemical and physiological reactions at the time of death, we are closer to answering the question of where do we go when we die... and what happens to us? Thank you.' Tom stood back from the platform. Realising how hard he had been gripping the lectern for the last twenty minutes, he flexed his painful fingers and felt every one of his forty years. Without prompting, a number of hands went up, and he started to field questions.

'How did your research group come together?' asked one delegate.

'Whilst researching biochemical and physiological aspects of cell death and still having a clinical practice, I guess I was always balancing life and death. Where the two meet became of compelling interest to me and I was drawn to various cases of near-death reported in my hospital. I expanded this to look into groups across the United Kingdom, then Europe, then worldwide, and got in touch with similar, like-minded colleagues who were investigating the subject. We shared cases and eventually, over time, came up with the standardised interview questions I have described.'

'And specifically, what were your inclusion criteria?' Another delegate wanted to know. Did you listen to what I've just said? thought Tom.

'We clearly needed to standardise a number of factors to differentiate our subjects from those who were temporarily unwell. We therefore decided on a cut-off of at least ten minutes without cardiac output, preferably confirmed, without any kind of supplementary life support such as receiving piped oxygen, during that time. This also included those who were being treated mechanically with heart massage and defibrillators, because those individuals were no less dead.' Tom paused to take a breath himself and a sip of water. 'The absence of any identifiable mental impairment after the event was vital, because we needed subjects whose brains made a complete recovery, to optimise their memory of their experience. For obvious reasons, this also excluded those who were completely anaesthetised. Determining levels of anaesthesia was very important.'

'The data seems to be exceptionally consistent, Mr Boyand, particularly for a questionnaire study and taken from such an unusual model, namely test subjects being on the edge of death.' Another delegate commented, with a suspicious tone in his voice. 'In the circumstances, wouldn't you have expected a much wider range of data – a scattering of results one might say?' The older man was reclined in his seat

with his legs crossed, commanding some authority in the room. Tom was concerned about the question and how it had been received by the audience, but he'd known that something like this would come up and had planned a response.

'Yes I agree, and that is the real crux of the study – that the results are so narrow. In my opinion it reinforces just how strong, consistent and predictable this reaction is within everyone, when placed in such a situation...'

Suddenly a man stood up in the centre of the auditorium. In his early fifties, his wavy dark hair loosely eased back from his face with wax, giving it a sheen that framed his olive-skinned complexion. He wore a black shirt, opened to three buttons down – one too many – exposing his thick gold rope necklace. His suit matched the shirt. He looked every inch the rock star psychologist at this meeting. 'Hi Mr Boyand, my name's Bob Wauberg and I'm a Professor of Psychology at Penn State University. I'd just like to congratulate you on your paper, and on putting together such a series of testimonies from across the world.' His comment stimulated a couple of audience members to politely start to applaud. Wauberg liked this, joined in and led the cheerleading. 'Yeah. YEAH!' He turned to the other delegates, nodding for them to join in with him – most did. This was the first time Tom had ever received applause at a scientific meeting, and it was certainly an eyebrow-raiser for him.

'I think it's amazing that you've been able to put together data from across six or seven centres worldwide,' Wauberg continued as the applause died down. 'Although I do think this raises questions as to how easy it was to control things like inclusion criteria, for example. It would obviously have been much more satisfactory to have just one centre where one research team would analyse the data, and the reliability of these data wouldn't be open to question. I understand that you've even visited individuals across the world – speaking to them in person – which again does raise a concern.' His soft, southern drawl lengthened the vowels as he spoke.

'What do you expect us to do, Professor? Unless you've got two hundred and forty people in *your* centre queuing up after having a near-death experience?' Tom responded, sounding a little more aggressive than he intended. 'We have to study these people from all four corners – sometimes quite remotely – because it's still a relatively rare presentation. That said, it has given us an insight into what people experience at the time of death.'

'You said – during your very well delivered presentation – that the consistency of the observations you have made reflect your earlier work on cell death; how the biochemical changes of the dying cell will, if extrapolated up to the level of a higher organism, result in the same experience by everyone.'

'Well, I didn't think I presented it as hard and fast as that, Professor, but, yes I believe that could be the case.'

'I would suggest, Tom, that you have not considered the individual's perception.'

Tom smiled. 'I suppose I should've expected a question on perception from the expert.' Bob smiled back before Tom continued. 'But in that case, why should so many people perceive the same thing, it doesn't make sense to me.'

'It makes every sense Doctor! This study could simply be showing us that the brain reverts to a familiar and comforting series of images when faced with the overwhelming fear of our own death. The accepted norm is falling, tunnels of light, being reached-out to, it's a familiar perception of people in dreams of death and in these so-called near-death experiences. It's almost cliché! All you are identifying is that people's minds seek comfort when they die, and leaving alone any religious debate, the familiar images you mention are what they create. You have proved little else. Perception is a three-dimensional construct that denotes the personality and the 'soul' if you like, and this aspect of perception is designed to ease their passing from life to death, to make it more acceptable, and it's a fairly commonly reported event.'

'I disagree. Perception reflects all aspects of a person's consciousness - mood, past experience, people's background, their social circle, their standing - thousands of variables. The consistency of our results across the world doesn't support your argument. We have found similar experiences across cultures, genders, socioeconomic backgrounds and levels of intellect, when it's known that different cultures view death in different ways. Some will revere it and therefore not wish to create a 'comforting construct' as you put it, but actually wish to embrace the next stage in their soul's existence. Are you suggesting that their perception of death would create the same old construct as those who are terrified of the end being a blank - a nothing? I can't see how they would be the same. Our work shows that there is one constant that is the same for all, and I am suggesting that that constant is the biochemical processes involved, having the same local cellular effects in everyone, which ultimately drives their experience. We have anecdotal evidence from cultures that don't typically see white light, tunnels, God, that kind of thing, and have no accepted norm of that in their belief systems, who describe near-death experience of white light and tunnels and so on.'

'Well exactly, Tom, *anecdotal* evidence. Analysis of trends from a survey is all very well, but it's so much less compelling or powerful than hard numbers. Where's your *actual* data?' Bob raised his arms out to the side, palms raised and shrugged, playing to his audience.

The whole room had become quiet and tense, the atmosphere thick and heavy as the audience watched the tennis match before them, wondering who would emerge as the victor, each delegate taking sides and rooting for their man.

'But no matter what you say,' Bob continued. 'Whatever your study claims to show, you can never prove or disprove it. You could say that the gate-keeper to the afterlife was a giant pink walrus riding a pony and nobody can prove otherwise.'

Tom concluded. 'I guess we need to do more research at the edge of life then.'

Later, in his hotel room, he Skyped home. Seeing and speaking to Sarah and the boys back in England gave him some perspective, but he was still bothered by the exchange between him and Wauberg. He had known about him beforehand, had heard that he liked to strut around at these meetings as the great 'I am', and tear down any ideas different to his own. Tom's argument was actually the better one during their exchange, until he'd stupidly mentioned the anecdotal data. He sank a large Scotch that he'd poured from the mini-bar and, hey, the world seemed a little better. Conclusive proof, folks, that we don't need psychologists, just strong drink. Tom showered and let the scalding water jets blast away at his forehead and neck, and at his concerns about the meeting. He carefully massaged moisturiser into the early signs of crow's feet around his eyes, then dressed in jeans and a casual shirt, smoothing his hair back from his face and tucking it behind his ears. Short hair had never suited him, but he never grew it long enough to tie back, so it always stayed at a floppy somewhat unmanageable length.

There was a drinks reception that night in the main bar. Tom didn't really want to attend and would have preferred to be on the first plane out of there – schmoozing wasn't his thing at all – but it did mean he'd be able to eat some canapés, which would at least solve the dinner dilemma. He lifted his jacket from the back of the dressing table chair, swirling it around his shoulders as he slid his arms in. He tucked his reading glasses into his inner jacket pocket – the only glasses he had ever found that didn't make him look like Garth from Wayne's World – grabbed his wallet and room card and left. Perhaps a liquid dinner might work better.

The main bar of the hotel was accessed through a number of terracotta tiled arches, where the floor stepped down from the foyer into the cooler, open space. The middle of the room was packed with small tables, each surrounded by high stools. Small, more secluded booths were secreted in the shadows off to the sides, lit by the orange glow of table lamps. The place was packed, bustling and noisy, with what seemed like all the delegates from the symposium in attendance. It wasn't exactly what Tom had wanted, but he grabbed some tapas from a passing waiter and made his way to the bar. He found the last bar stool available and ordered a glass of Rioja.

When in Rome.

The food was exceptional and he asked the bartender if he would get him some more. Tom didn't notice the older Spaniard's disappointment in him for not getting off his backside to find the finger-food. The man acted like the perfect host and managed to direct a waitress over. Tom accepted some more food and a refill for his glass, raising it in thanks to his new Spanish friend.

'Muchas gracias!'

'¡De nada, cabron!' The barman smiled, covering the insult.

Tom finished his nibbles, and all that left him to do was to work through his host country's wine cellar, which he managed with some aplomb. For the first time in a while he emptied his head and thought about nothing, becoming oblivious to the comings and goings of people at the bar around him, enjoying being anonymous and the solace of the grape. After a while he became aware of someone standing next to him. For most of the evening, people had ordered drinks over his shoulder, so he thought nothing of this new presence until it spoke, breaking his relative isolation.

'Good evening.' Tom recognised the voice as unmistakeably Bob Wauberg's. He turned to look half over his shoulder, nodded very slightly, and replied. 'Professor.'

Bob smiled, nodding his head in return and said. 'I don't think there's any need for us to be so formal anymore, do you Tom?'

'Was there any need for earlier?' Tom said bitterly, looking back at his glass as he responded.

'Just a little Q & A,' Bob shrugged by way of response.

'Oh really? Felt to me like you were really going to town on my work just because I was taking a different standpoint to yours. They were *your* crowd and you played to them by starting on me. Didn't seem to me like a little Q & A. Or is that just my *perception*?' The wine had taken him to the point of slurring his words, petulantly so, but he focused enough to get his point across.

'Well, if you *are* gonna put your work out there, there's going to be debate. If you are gonna put your work out there and make *conclusions*, there're going to be people who shoot you down.'

'And that was your job,' was Tom's immediate retort, even though part of him realised there was no need for this, and that his colleague was trying to offer him something.

Bob raised both hands defensively. 'Tom, I meant what I said. It's a great effort that you put together this piece of work. I just think you're making too many leaps and connections between changes happening in people's cells and how they perceive things – that's all. There are too many pathways and processes from a cellular point of view, and in terms of their higher functioning there's their consciousness and perception that you don't consider. That's all I'm saying.' Tom sat motionless, listening to Wauberg speak. Some of what he was saying was exactly the same as earlier, but it also sounded like Bob was trying to give him some advice.

'Would it be possible to see some of the raw data – the questionnaires themselves? I'd be really interested in the minutiae of the testimony and see how one reads compared with the next, being that they are so similar.'

Tom's eyes widened slightly. 'Sorry, I didn't keep them – didn't see the need when we'd transferred the data to computer and got the paper out. With major refurbishment happening at work and moving offices, and our renovation work at

home, space was at a premium, so they were an easy thing to trash to free up some room.'

'Pity, would have been interesting to see. The data is compelling though, Tom, such consistency of results across everyone...' Bob turned his hands palm upwards.

'So you're coming around to my way of thinking?'

'That there is one reason why they all have a very similar experience? Sure. It's just that our reasons differ.' A smile lit up the older man's face.

'I don't want to go through this again, I couldn't really have more convincing results if I'd made them up. And the patients involved are such a broad spectrum of people that I don't see how it can be anything else other than biological.'

'Well, maybe. It's like I said, we'll never know until we can actually send someone into that situation with recording equipment.'

'At least we're agreed on that - it's the next natural progression.'

'You know what, Tom?' Bob continued. 'We should work together on this.'

Tom shook his head and turned properly round to address the more experienced academic. 'The thing is, Bob, I already know enough overbearing pricks with an excess of personality – I don't really need another one.'

'Just trying to help by pointing out the counter-argument!' Bob smiled at the somewhat inebriated younger man.

'Devil's fucking advocate, eh?'

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Within two months, Bob Wauberg was offered the post of Chair of Clinical Psychology at St Catherine's University Hospital NHS Trust. Tom Boyand's hospital.