

A tribute to Professor Edward Winter

Edward Winter 28th June 1950 – 18th July 2020

Copeland*, R.J., Flint, S., Nevill, A., Wheat, J., Breckon, K., Maynard, I.M., Saxton, J., Biddle, S. J. H., Williams, C., Carter, A., Breckon, J., Broom, D., Reece, L., Ruddock, A., Shibli, S., Barrett, D., and Stevens (née Winter), H.

A note from the corresponding author*:

I would like to thank colleagues across the sport and exercise science community for their contributions to this tribute to Edward. Whilst those above are named directly, dozens of others have contributed stories, memories and words of gratitude for the impact that Edward had on their life. I was fortunate to have Edward supervise my PhD and then mentor me over the next 15 years at Sheffield Hallam University through to becoming a Professor. I am ever grateful for his wisdom, insight, humour, grace, and encouragement. It was incredibly humbling to have the opportunity to lead this tribute and I was delighted that the final version was edited by Edward's daughter Holly. Although Edward is no longer with us, his influence can be seen throughout the sport and exercise science community.

Collegiate Campus at Sheffield Hallam University is leafy and quiet. Once home to wealthy Sheffield cutlers, it is characterised by stone buildings from the original 1836 Collegiate School and 1905 Teacher Training College. The campus was used as a hospital during WW1 and has several fine Victorian houses as part of its footprint. Not the most obvious setting perhaps within which to uphold the principles and practices of science within the discipline of sport and exercise. Yet this was the pursuit of Professor Edward Winter BEd MSc PhD DSc CSciFBASES FafPE for more than 20 years as Professor of the Physiology of Exercise at Sheffield Hallam University.

Prior to joining Sheffield Hallam, Edward graduated from Loughborough University with a BEd in Geography and Physical Education and subsequently an MSc and a PhD. He made various contributions to the science of sport and exercise in his role in physical education at Bedford College of Higher Education, later part of De Montfort University. Indeed, sport and exercise science spawned from physical education, and Edward was one of the founders of the discipline. An early graduate from Bedford, Karon Breckon (née Webster) remembers Edward in his early days:

"I was a student of Edward's back in his Bedford College days in the 1980s. I recall fondly his sports car and academic rigour and principles, even back then. Edward, unsurprisingly, kept all of his records from those days and gave my husband a copy of my exercise physiology marks (and those of my friends) for our wedding speech. Only Edward would have had those to hand, and we laughed at the 'could do better' scores."

In 1988, funding from the Sports Council of Great Britain supported the establishment of the Sport Science Education Programme. This programme brought together institutions in Higher Education with national governing bodies of sport to support the development of national teams, the identification of talent and to enhance coaching. The scheme also provided opportunities for doctoral students to contribute, through rigorous research methods, to key challenges faced by national teams. The squash programme, originally overseen by the late Professor Craig Sharp, was taken on by Edward, a county-level squash player himself, in 1992. Edward's steadfast belief that interventions should be research-informed and embedded in practice with the utmost rigour, underpinned the approach he and Damon Brown (PhD student at the time) took to physiological testing in laboratory and field-based procedures to drive performance. While senior teams of the time benefitted from Edward's work, the development squads were where his work made the greatest contribution. His commitment to nurturing future generations of researchers to uphold the principles of science in the pursuit of sport performance was a hallmark of his career.

In 1999, Edward, with his wife Anne, arrived in Sheffield. Recruited by Professor Roger Bartlett, Edward completed the 'Three Profs' triumvirate, alongside Professor Ian Maynard, with a mandate to establish the discipline of Sport and Exercise Science as a core offer at the University. Over the next decade, the Centre for Sport and Exercise Science (CSES) at Sheffield Hallam would become one of the largest sport science related research centres in Europe. One of Edward's early appointments in CSES – Dr (now Professor) John Saxton recalls his first meeting with Edward in year 2000:

"The first proper meeting I had with Edward was at his house when I was contemplating taking the job as Senior Research Fellow as part of CSES. Despite being one of the founding fathers of Sport Science in the UK, Edward humbly met me in his home, made me feel very welcome and

his enthusiasm for his discipline, this new venture at SHU, and the research opportunities it would bring, were plainly evident. I could easily see him becoming a very affable and valued work colleague – and he did for ten years! His teaching and research were built on a huge underpinning knowledge-base, that included the history of exercise physiology (and medicine) and an intricate knowledge of landmark publications in the field. If you ever had a question on anything physiological – from first principles, Edward was the go-to person. His whole approach and mentality towards teaching and researching within his discipline brought a strong sense of academic credibility to CSES and he achieved all this with good humour and humility.”

In his capacity as Professor of the Physiology of Exercise (the precision of the title itself is not to be overlooked), at CSES, Edward had a leading role in shaping the physical environment and the culture of the centre. Professor Ian Maynard recalled:

“Edward led the design of the physiology laboratories at Collegiate Hall, pioneering the concept of applied research alongside teaching laboratories. This approach is now commonplace across the sector, testament to Edward’s vision for sport and exercise science. He also ensured that the teaching programmes were research-informed with the utmost rigour and his pursuit of correctness and precision in the definition of terms transcended physiological boundaries meaning he was highly respected among esteemed academics in other sport and exercise science disciplines.”

Allometric scaling was a major area of interest for Edward. Ensuring that important physiological measurements were properly scaled aligned with his love of order and routine and much of his early work was undertaken with Professor Alan Nevill:

“I first met Edward at the British Association Sport Sciences (BASS) annual conference in Bangor 1989. He was asking a presenter to justify the use of ratio standards (per body mass), and why they were not adjusting for differences in body size using regression standards. His thought-provoking question; “how should we adjust for differences in body mass” turned out to be the start of a hugely successful collaboration between Edward and myself on the topic of “Scaling”. Our mutual interest led to numerous articles, book chapters, BASS/BASES workshops and editorials, which have shaped measurement in sport and exercise science. As Editor in Chief of the Journal of Sports Sciences, I also had the pleasure of appointing Edward to Section Editor of Sports performance in 2004. His ability to ask the right question at the right time made him an ideal candidate. After 12 years on the editorial board, his enthusiasm and dedication to the Journal can be characterized in his editorials, many of which have become “classics” (see Winter, E. M., & Knudson, D. V. (2011); Winter, E. M., Abt, G. A., & Nevill, A. M., (2014); Winter, E. M., & Nevill, A. (2014)) informing authors, readers and the editorial board of the correct procedures we should adopt. There can be no doubt that Edward will be sadly missed by both the Journal and the scientific community as a whole”.

Edward’s pursuit of accuracy in the use of terms and nomenclature of exercise was not without challenges, but Edward’s character as well as his strength of purpose were broadly recognised by his peers, as Prof Stuart Biddle recounts:

“In 2007, Ed invited me to join him and Neil Fowler to author a paper defining ‘exercise’. It was an interesting experience because I disagreed with the approach taken and felt I would cause some confusion by supporting a ‘new’ definition to that used in my field of psychology and public health by Caspersen et al. (1985). I told Ed I felt it was better for me to withdraw from the paper. He was disappointed yet handled it with his usual professionalism. You could say it was a most amicable split on this one issue. The paper was published in 2009 (Winter & Fowler, 2009). I always appreciated Ed’s approach to a tricky professional issue. We smiled rather than argued about it. We will miss Ed so much. Let us reflect on his wonderful legacy as both an academic and a great all-round person.”

For the record, Edward and his co-author ultimately defined ‘exercise’ as follows: *“A potential disruption to homeostasis by muscle activity that is either exclusively or in combination, concentric, isometric or eccentric”* (Winter and Fowler, 2009; Winter et al. 2015).

As a keen historian, Edward was at pains to ensure that alongside rigorous methods, all research was undertaken within a robust ethical framework. At CSES, Edward established the structures, documentation, processes and procedures required for governing research and ensuring appropriate ethical scrutiny. He went on to be Faculty Head of Ethics for over a decade, leading ethics and research governance across academic departments and research centres in the Faculty of Health and Wellbeing at Sheffield Hallam. Edward commonly referred to the crimes against humanity during the Second World War, the subsequent Nuremburg trials and the discovery of experiments that prisoners of war were ‘*subjected*’ to by the Nazis. He would cite the cold-water immersion experiments of Professor Ernst Holzklohn and Dr Sigmund Rascher as examples of why humans are to always be considered *participants* in research trials, not *subjects* (Winter, 2009). Every student of Edward’s was left in no doubt as to the importance of this message. Edward would add to the poignancy of his narrative with stories about his father - William Edward Winter DFM (pictured) – who as a Flight Sergeant and wireless operator within Bomber Command, 106 (CVI) squadron, undertook 31 missions between October 1944 and April 1945 as part of the allied forces’ resistance against the Nazis. In retirement, Edward would always return to the Collegiate Campus at Sheffield Hallam University for an Act of Remembrance that was undertaken by colleagues each November.



One of Edward’s most notable contributions to the field was in the establishment of the British Association of Sport and Exercise Science (BASES). In 1984, with a vision to consolidate and strengthen the voice of sports sciences in the UK, BASES began following the dissolution of the Biomechanics Study Group, the British Society of Sports Psychology and the Society of Sports Sciences. Edward was a founder member of BASES and made a sustained and substantial contribution to the Association for more than 35 years. A former Secretary and Director of BASES, Edward became a BASES Fellow in 1998. He organised the very first BASES Student Conference (1988), authored the Sport and Exercise Physiology Testing Guidelines: Volume I – Sport (2006) and co-authored the BASES Expert Statement on Ethics and Participation in Research of Young People (2011). Edward also co-designed the

Association's accreditation scheme, acted as a non-executive director of the BASES Board and received accreditation himself for both research and scientific support in physiology. Professor Clyde Williams provides his account of Edward's contributions:

"From the inception of BASS, Edward committed himself tirelessly and unselfishly to the aims and promotion of the Association. High standards and precision were Edward's 'hall mark', clearly reflected in all that he undertook. The format of formal meetings of BASS, led by Edward at Bedford, became the 'exemplar' and his laboratory was a model of how process and methodology combined to provide students with the very best experience of human exercise science. When BASES introduced 'laboratory accreditation' Edward was a key member of the team and went on to edit the Association's two volume 'Sport and Exercise- Physiology Testing Guidelines'. The Guidelines for 'Sport testing and Exercise and Clinical Testing' have shaped and set the standards of 'good practice' for laboratories around the country and beyond. As secretary, he dealt with the many challenging issues facing the growing Association, not only efficiently but with diplomacy and great insight into the long-term consequences of many day to day decisions. If there was a difficult task needing completion before an impending deadline, the Association's officers would turn to each other and say 'phone Edward' knowing that they would receive an immediate offer of help. He was a role model for all those who had the good fortune to be taught, supervised or mentored by him and although he could have had a successful career in engine design and performance, we are grateful that he choose sport and exercise science as his profession."

Dr Anouksa Carter recalls meeting Edward at a BASES workshop:

"I had the good fortune of first meeting Edward when I attended a BASES Physiology Workshop, back in the '90s. Little did I know that six years later Edward would be my manager and mentor at CSES. Edward's ability to see science as part of the bigger picture is what sticks with me. I remember on many occasions Edward enthusiastically sharing something he had recently read. 'Pale Blue Dot' by Carl Sagan, was one such essay that I remember being introduced to; 'There is perhaps no better demonstration of the folly of human conceits than this distant image of our tiny world'."

Throughout his career Edward authored more than 200 publications, was involved in the review of more than 2,000 manuscripts and abstracts for all of the major journals in sport and exercise, had extensive experience of supervising and examining DSc, PhD, MPhil and MSc-by-research candidates. Professor Jeff Breckon said about Edward:

"Every colleague that met Edward will talk of his integrity and thirst for understanding, as well as his magic tricks and supercars! While the latter represented his fun side, the academic depth of Edward also depicts someone who positively influenced both his colleagues and students to ask accurate and concise questions, to interrogate data, and to present it in a way that made sense. Most importantly, to get your grammar and syntax correct."

Edward remained resolute in his determination to ensure that sport and exercise science upholds the principles and practices of science and this is perhaps encapsulated in one of his latter contributions –

leading the submission for the award of Chartered Scientist status by the Science Council on behalf of BASES in 2013. This work meant that BASES Accredited members became eligible to gain Chartered Scientist (CSci) status. There could be no better fitting accolade for Edward given the Science Council objectives to promote high standards in science and recognise the professionalism of practising scientists. At the time Edward noted:

"Being a chartered scientist allows all scientists working at a professional level to be recognised on an equal footing. It represents a single standard for all scientists and recognises high levels of professionalism and competence in the science of sport and exercise."

Edward's legacy can be observed in the contribution he made to Postgraduate Research at Sheffield Hallam and beyond. He held the role of Chief Academic Steward at graduation and for many years acted as Postgraduate Research Tutor for Sport. Edward led research degree provision as Head of Research Degrees, during which time he was prolific in his support and training of PhD students. Prof David Broom commented:

"Edward delivered a training series for doctoral students when I was just finishing my PhD. Having attended his 'How to prepare for the viva', I went into mine feeling invincible. His first question, 'What is a PhD?' left me flustered, which is ironic considering you have been doing the thing for three solid years plus. The answer: 'A PhD is a licence to practise as an independent researcher - the aim of which is to provide an original and novel contribution to knowledge that seeks to change practice.' This now rolls off the tongue and is the first question I ask PhD candidates when I examine them."

Dr Lindsey Reece said of Edward:

"The roar of Ed's colourful sports car, a personal greeting, proud stories of Mrs Luscious [Anne] and his beloved family over a morning coffee were daily features of my Hallam life that Edward helped create. We regularly debated the use of P values, metrics of meaningfulness and the philosophy of a PhD. His positive legacy of science, grammar and love of the principles of science live on in me and so many of his colleagues."

He developed and ran a doctoral training programme and was devoted to supporting his students along their journey and preparing them to supervise their own students when the time came. One of his mentees Dr Alan Ruddock said about Edward:

"Edward would probably consider this tribute superfluous and full of hyperbole, but there are myriad lessons he taught me about science that cannot be overlooked. I had the privilege of knowing Edward for 15 years. First as an inspirational teacher (to me and hundreds of others), then a nurturing colleague and mentor and co-author at Sheffield Hallam, and finally a supportive friend. His contribution to upholding the principles of science in sport and exercise science was profound. One of his favourite terms was:

"Everything's already been said before, but since nobody was listening, we have to start again"
(Andre Gide (1869 – 1951).

A nod to the unerring consistency of his message that reached his students with wit, sincerity and grace in equal measure.”

Edward was not just a notable academic. He had a passion (he rarely liked this term as he opined that passion clouded judgement) for engineering manifest in driving (and building) fast cars and flying (a connection with his late father of whom he was immensely proud). Indeed, he once ran a small business tuning and re-boring engines to the finest of tolerances. Edward was a wonderful raconteur and magician and a member of the Magic Circle. His sleight of hand and diversionary commentary were legendary at BASES conferences and CSES Christmas parties.

Colleagues across the sport and exercise science community have paid tribute to Edward on Twitter, where he could regularly be found debating the challenges of the day. A thread of these can be found here: <https://twitter.com/search?q=%40winteredward&s=09>

Professor Simon Shibli shares his memories of Edward;

“We were somewhat thrown together for a proposal to the British Heart Foundation and I went to discuss the ‘pitch’ with him in his office. I discovered that we were both proud Loughborough graduates; that we bought our shirts from the same Jermyn Street tailor and shared a love of the English language. I considered Edward to be ‘the professors’ professor’. A true professional, a gentleman and a gentle man, a role model for how a professor should behave, great company, and a sincere man of principle. Edward had a great sense of humour and exuded gravitas. People of this calibre are few and far between and Professor Edward Winter will be sorely missed.”

Edward was a county cricketer in his youth and an accomplished 800m runner. He set the Cumbrian schoolboy record for 800m, which lasted nearly 20 years. Edward was also a skilled squash player captaining several age-group Yorkshire teams and recently coming very close to representing England in the Over 65s - he ranked ninth in the country (when the top eight got selected). It was perhaps his consideration for his fellows, especially those under his academic mentorship, that truly defines how he will be remembered.

David Barrett, a colleague at Sheffield Hallam University recalls:

“Edward made everyone he met feel as though they were the only person in the room to whom he was listening. He was approachable, generous, and supportive to academics at all stages of their careers. I shall miss his enthusiasm and ready wit around the halls of the university, the occasional rumble of a fast car leaving by the front gate, and the opportunity to be enlightened and cheered whenever we came into contact.”

Prof John Saxton adds:

“He had an unquenchable thirst for new knowledge and for understanding how things came about. I remember during the latter stages of his career at CSES he ushered me into his office to show me the latest book he was reading on the history of medicine – it was probably the thickest

(and most comprehensive) book on a topic I had ever seen! Ed was also tremendously humble, often expressing his gratitude in the conversations we had for the opportunities his career had brought him to work with talented people. He loved his discipline and felt privileged that he was able to spend his career in the sport and exercise sciences.”

Edward Mitchell Winter was born in Penrith in Cumberland (now Cumbria), to William (Bill) and Nancy. He was educated at Cockermouth Grammar School. Edward and his wife Anne have two children Holly and Michael and three grandchildren.

He died on July 18th, 2020. He had just returned from his routine morning run.

He will be greatly missed by family, friends and colleagues. Edward’s legacy across sport and exercise science in the UK and beyond was profound. In recognising his work, it is appropriate to leave the final words to Edward:



“Two simple questions define good work: First, does the work advance knowledge and understanding and second, will the work change practice?” (Winter and Nevill, 2014; Winter, Abt & Nevill, 2014).

References

- Winter, E. M., & Maughan, R. J. (2009). Requirements for ethics approvals. *Journal of Sports Sciences*, 27(10), 985–985. <https://doi.org/10.1080/02640410903178344>
- Winter, E. (2005). Writing: Bartlett revisited. *Journal of Sports Sciences*, 23(8), 773–773. <https://doi.org/10.1080/02640410500217156>
- Winter, E. (2008a). Use and misuse of the term “significant”. *Journal of Sports Sciences*, 26(5), 429–430. <https://doi.org/10.1080/02640410701786827>
- Winter, E. (2008b). Sport and exercise science: Just how new is new? *Journal of Sports Sciences*, 26(12), 1247–1248. <https://doi.org/10.1080/02640410802321367>
- Winter, E. M., Abt, G. A., & Nevill, A. M. (2014). Metrics of meaningfulness as opposed to sleights of significance. *Journal of Sports Sciences*, 32(10), 901–902. <https://doi.org/10.1080/02640414.2014.895118>
- Winter, E. M., Abt, G., Brookes, F. B. C., Challis, J. H., Fowler, N. E., Knudson, D. V., Knuttgen, H. G., Kraemer, W. J., Lane, A. M., van Mechelen, W., Morton, R. H., Newton, R. U., Williams, C., & Yeadon, M. R. (2016). Misuse of ‘Power’ and Other Mechanical Terms in Sport and Exercise Science Research. *Journal of Strength and Conditioning Research*, 30(1), 292–300. <https://doi.org/10.1519/JSC.0000000000001101>
- Winter, E. M., & Fowler, N. (2009). Exercise defined and quantified according to the Système International d’Unités. *Journal of Sports Sciences*, 27(5), 447–460. <https://doi.org/10.1080/02640410802658461>
- Winter, E. M., & Knudson, D. V. (2011). Terms and nomenclature. *Journal of Sports Sciences*, 29(10), 999–1000. <https://doi.org/10.1080/02640414.2011.588821>
- Winter, E. M., & Maughan, R. J. (2009). Requirements for ethics approvals. *Journal of Sports Sciences*, 27(10), 985–985. <https://doi.org/10.1080/02640410903178344>
- Winter, E. M., & Nevill, A. (2014). You’ve told me what you have found, but you haven’t told me the so-what. *Journal of Sports Sciences*, 32(1), 1–1. <https://doi.org/10.1080/02640414.2013.870698>
- Caspersen, C. J., Powell, K. E., & Christenson, G. M. (1985). Physical activity, exercise and physical fitness: Definitions and distinctions for health-related research. *Public Health Reports*, 100, 126-131.