

Presentation of the Finlaison Medal to Professor Mary Hardy

[Sessional Research Meeting, Staple Inn, London, 22 October 2012]

Dr David Hare, F.F.A., President Elect of the Institute and Faculty of Actuaries, presented Professor Mary Hardy with the Finlaison medal.

Dr Hare. Professor Mary Hardy has made, and continues to make, significant contributions to the profession in education, research, translation of research into practice, and governance in furthering these aims.

Graduating in Mathematics in 1979, Mary trained as a teacher then joined the Government Actuary's Department, qualifying FIA in 1988. From 1986–97 she was Lecturer in the Department of Actuarial Mathematics and Statistics at Heriot-Watt University, graduating PhD in 1994 with a thesis on Life Insurance Solvency. In 1997 she moved to the University of Waterloo, Canada, becoming CIBC Professor of Financial Risk Management in 2004.

In the 1990s Mary contributed significantly to the UK Profession's education system as Principal Examiner for Subject A, having co-authored first the AES's materials, and later the Core Reading. A SIAS paper that she co-authored in 1990 was very influential on the Profession's syllabus review at that time. In Canada she has been prominent in education matters of the CIA and the SoA; chairing the Section Council of the Education and Research Section of the SoA in 2003–4 and being Friend of Council since 2004; serving on the Board of Governors of the SoA in 2004–7 and as Vice-President of the SoA from 2007 to 2009. Recently she led the process of accrediting the Waterloo Masters degree with the UK Profession, the first North American degree to be so accredited. In 2009 she co-authored *Actuarial Mathematics for Life Contingent Risks* in the CUP International Series on Actuarial Science, which is becoming widely adopted as a standard text for students.

In research Mary has published on a wide variety of topics, including life insurance solvency, mortality, financial modelling and risk management. She is recognized as an internationally leading researcher, highlights being the Best Paper prizes in *NAAJ* (2001), *ASTIN Bulletin* (2003) and being one of the 24 “thought leaders” awarded the initial CERA qualification by the SoA in 2007. She has supervised, or is currently supervising, eleven PhDs, and has examined many PhDs internationally.

Between 1995 and 1998 Mary undertook commissioned research into Segregated Fund Guarantees. This led to an influential report that significantly altered reserving practice in the Canadian life insurance industry. Related to this work in 2003 she wrote a research monograph for practitioners, *Investment Guarantees: Modelling and Risk Management for Equity-Linked Life Insurance* (Wiley) which is part of the recommended reading for some of the SoA's examinations. Other commissioned practical work has related to asset-liability models, equity model calibration and Canadian insured lives mortality.

One of Mary's major contributions, in the UK and North America, has been in editorial work on professional actuarial journals. She was a Deputy Editor of *BAJ* from 1994–2002. She became

co-editor in 2002 with specific responsibility for refereed research papers. When the UK Profession launched *Annals of Actuarial Science* in 2005 she was its first Editor (and in fact coined the name). She stepped down in 2008 to become Editor-in-Chief of *NAAJ*, of which she had been a co-editor since 2003. As an Associate Editor also of *Insurance: Mathematics and Economics*, *ASTIN Bulletin* and *South African Actuarial Journal*, she has made a leading contribution to actuarial journal publishing.

Mary is still extremely active in all the areas mentioned and has much more to contribute yet. Her record of service to the Profession, in the UK and worldwide, is outstanding and the award of this Finlaison Medal is highly deserved.

Professor Hardy. Mr President-Elect, ladies and gentlemen, I am delighted, surprised and humbled to receive the Finlaison medal. As Jane Austen almost said: you could not have bestowed this award on a more grateful object. Thank you for this honour.

And thank you also for the opportunity to acknowledge publicly how generously I have been supported and mentored through my career. My first actuarial post was at the GAD, where, guided gently by Edward Johnston, the ethos of rigour, integrity and public service served as a strong foundation for all that followed. Joining Heriot-Watt University, as a concurrent lecturer and graduate student was a dream for me – daunting, at first, frustrating sometimes, but, overall, tremendously satisfying. I have loved working in the academic environment. I recall, being asked several times in the late 1980s, quite incredulously, why I would choose to work as a low paid academic, when the salaries were very much greater in industry. My response would be to ask the questioner whether he (generally) would continue to work after a suitably large lottery win. Always, the response was ‘absolutely not’. But I knew that I would, proving that the market value of an asset may be different from its intrinsic value – a view, incidentally, that has recently been embraced by the financial economics community.

My doctoral supervisor at Heriot-Watt was Professor Howard Waters. Howard’s unstinting support and inspiration started the day I arrived at H-W, and continues to this day. His influence on a generation of academics who came through H-W was immense. Talking Howard into being my supervisor was one of the two best decisions of my life. From Howard I learned that being an academic researcher in our field can be fun – should be fun—but also carries responsibilities. Exploring new ideas, with rigour, knowing that perhaps many won’t work, but sometimes finding ones that will, is fun. The responsibility aspect lies in working on problems that matter, and making our work interesting and accessible to those who are in a position to implement solutions. Every research project that I have ever worked on has had, as its ultimate objective, some improvement to actuarial practice, and I have been lucky enough, once or twice, to feel that I have indeed made a difference, and that is satisfying. Even better, as I discover tonight, is to have the recognition from my profession and my peers.

It’s important, though, to point out that everything I have achieved has really been achieved by a large team of colleagues, teachers, collaborators and graduate students, and, crucially, by the creative, open-minded change agents within industry who are prepared to explore and advocate for new approaches within a profession which is naturally quite conservative. David Hare is exemplary in this role, and before him, David Wilkie was a powerful influence on many researchers, in working to develop actuarial science and actuarial practice in tandem, aiming to keep the science practical and the practice scientific. Ragnar Norberg said of academics “We must be useful”, and to

be useful we must make the effort to speak with and listen to actuaries and non-actuaries in industry, regulation and policy.

My PhD was on the topic of stochastic simulation in life office risk management; at the time the technique was not well accepted and my research (like most) was not particularly well-received. A working party of the IoA labelled simulation as a “horrendously incomprehensible technique to demonstrate the obvious”, which was a bit harsh even at the time. Since that time, the UK actuarial profession has been on its own journey. I have been particularly heartened by the development of a much greater willingness within the UK profession to recognise the value of academic research, more openness to new scientific paradigms (even not actuarial), and more interest in that essential dialogue between industry and academia. One result is that the UK profession is recognised worldwide as the leader in the developing and highly important field of longevity risk management.

At Heriot-Watt, and, subsequently, at the University of Waterloo, I have been privileged to work with some of the best and brightest and most industrious students of their generations. These students have honoured us by choosing to commit their energy and talent to the actuarial profession. The citation for this award mentioned education and governance, and I admit to having exercised a somewhat dogged, sometimes irritating tenacity in pressing for continuous quality improvement in these fields. A major motivation is the desire to ensure that our profession continues to be worthy of the extraordinary talent that aspires to join us.

I'd like, before I end, to mention a few more people who have helped me through the years, people from whom I learned much about actuarial science and about actuarial practice, about passionate engagement, and that if we are committed and dedicated, we can change the world in ways that may be small but may be significant. From Professors Jimmy Gray and John McCutcheon, from Angus Macdonald and Andrew Cairns and all the other staff at H-W through the 1990s, and from Harry Panjer and Ken Seng Tan at Waterloo. From David Dickson, co-author with Howard and myself of one of my proudest achievements, *Actuarial Mathematics for Life Contingent Risk (AMLCR)*, a textbook written with all those principles of scientific practice and practical science in mind, and the most fun collaboration.

You may be curious about the other ‘best decision’ of my life – and the answer is both professional and personal. My husband, Phelim Boyle, is a Gold medallist of the Institute of Actuaries. He is a brilliant man, a highly accomplished academic in actuarial science and finance, and also one of the most generous of collaborators as numerous researchers young and old will attest. Phelim helped me to understand that I had something valuable to contribute, and that I should fight to make myself heard. His patient, unwavering support and encouragement are the reasons I am here tonight.

Ladies and gentlemen, thank you again for this honour. I remember when I dreamed of the day I would be here to collect my certificate of Fellowship, exams over, fully instituted. I never dreamed that I would be back for an occasion such as this. I have always been proud to be a member of this profession, and I will continue to strive to ensure that my profession will always be proud of me.

Thank you.