Small steps come before giant leaps

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The drama of the Apollo missions to the moon unfolded while I was a post doc at the University of North Carolina at Chapel Hill. My wife, Susan, and I sat gripped by the TV as the Apollo 11 mission and the historic first step on the moon on 20 July 1969 were brought to us in real time. We attended the launch of Apollo 12 in Florida, though our view and hearing were obscured by a rainstorm. So, while we were only about 7 miles from the launch pad, our families in the UK 4,500 miles away, had a better view than we did! Later, with Walter Cronkite, we lived through every minute of the fateful outward and nail-biting return journeys of Apollo 13. We rejoiced when he reported a successful splash-down in the Pacific Ocean and the safe return to Earth of Lovell, Swigert and Haise. I was, therefore, moved by the announcement of the death of Neil Armstrong on 25 August to contemplate (in a small way) humanity and human destiny. What was it about the time, the people (individually and collectively) and the circumstance that made this a unique milestone in human achievement (but one which, at the time, was viewed as an expensive distraction by some and a massive deception by others)? There is probably less of a recollection of the massive collective effort that went into the US space programme that ended up with that ‘small step’ for a man, starting with the early planning and political decision-making, the bringing together and the organisation of the skills, judgements, insights, ingenuity and resources needed to solve the many component challenges and problems that led to that moment on that memorable Sunday. Neil Armstrong’s personal demeanour after the triumph seemed to reflect his awareness of the teamwork of all those

involved in the enterprise and its significance as well as of the risks involved, particularly to the lives of the astronauts themselves. The echoes of this triumph are still with us as we marvel at NASA’s achievement in landing and successfully deploying the Curiosity roving laboratory on Mars.

In its different way, the success of the London Olympics and Paralympics was also built upon individual and team endeavour and commitment, made possible only through global organisation (with all its faults) and national political will that had a vision of an under-developed part of east London, including highly polluted sites, the legacy of Victorian and Edwardian industrial development, being transformed into a show-case for spectacle, drama and expressions of national pride (and not just of the host country). While there was success at the Games for some and disappointment for others, there was in addition, within an intensively competitive sporting environment, a celebration of the things we have in common, a welcome for strangers, a generosity to opponents, an appreciation of effort and commitment and a collective pride in the success of others in confronting and overcoming often very daunting personal challenges.

We were also inspired by the opening and closing ceremonies, particularly by Stephen Hawking’s narration at the opening of the Paralympics, telling us that the human spirit and intellect must work as one, with the words: ‘*We live in a universe governed by rational laws that we can discover and understand. Look up at the stars and not down at your feet. Try to make sense of what you see and wonder about what makes the universe exist. Be curious.*’

There will be both an enduring legacy in the minds and hearts of participants and spectators alike, as well as a physical legacy that includes the giving over of the laboratory used for drug testing of athletes to the nobler area of

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'phenomics'. Phenomics is concerned with the chemistry of human cells and tissues that reflects the unique genetic make-up and lifestyle of each one of us as individuals. The MRC-NIHR Phenome Centre, jointly funded by the Medical Research Council and National Institute for Health Research, will be the first institution whose prime function is the study of individual and group susceptibility and response to disease, in the belief that the discovery of knowledge (and its sharing) of relevant biomarkers will assist in effective prevention and cure.

Is there anything else that might have a bearing today, particularly as we face a range of global challenges, not least of which is a need to move to a more sustainable way of living?

The Apollo programme and the Olympic Games do have this in common: they are both expressions of noble human endeavour, individual and collective, that were only embarked upon via a political process that was, in part, altruistic in the sense that the initiators (whether John F Kennedy in the US or Tony Blair in the UK) were unlikely to reap the political rewards of success during their terms in office. However, there was still political calculation involved and both programmes would probably have not got off the ground (the first one literally!) had the economic circumstances, at the time the critical decisions were made, been less favourable than they were. This is the critical point regarding the current global challenge of sustainable development as we seek ways, for increasing numbers of humanity, to continue to live equably and equitably on Earth within limits set by planetary resources.

The difference is, of course, that the objectives of sustainable development are not as readily defined as were those of the Apollo programme and the London 2012 Olympics. Even if the objectives could be agreed, it is harder to see the necessary majorities signing up to what may be needed, over decades, to convert the objectives into

reality. These changes go to the heart of how the more prosperous of us currently live and how the less prosperous aspire to live. Change will not simply come about through better chemistry nor even better technology. As I have written elsewhere, these are both critically necessary but, on their own, not sufficient. What is needed is a means of delivering sustainable global economic security. Some credible economic thinkers, such as Tim Jackson of the University of Surrey in the UK, have written cogently of '*prosperity without growth*'. However, will there be enough electoral or political support to vote leaders with the vision and will into government with the necessary mandate to press the case for sustainable change at local, national and global level?

While economic times are tough these objectives, and those that espouse them, will not find sufficient favour. Unless prosperity is improved electors will not be willing to contemplate radical change. Unfortunately, an economic recovery based conventionally on the cycle of increased consumption, employment and prosperity has within it a perpetuation of the very problems that led to where we currently are. A 2012 Catch 22. A favourite Victorian social reformer of mine, John Ruskin, encapsulated the basic problem some 150 years ago, when he wrote: '*wise consumption is a far more difficult art than wise production*'. Change will probably take more than the political vision of a John F Kennedy, the resources of a global industrial giant, a continuous collective effort greater than that shown by the world's Olympic and Paralympic athletes, officials and volunteers and the engagement and support of individual citizens more numerous than the many millions who watched London 2012 around the world. Quite a thought. But we must be inspired to live in hope, even if the first steps we may take are small ones.

As Walter Cronkite might have said: '*and that's the way it is*', September 17, 2012.