Janet Heasman

Janet Heasman was born in Hartlepool on the north-eastern coast of England and attended University College Hospital Medical School in London. As a second-year medical student, she took an intercalated BSc degree in J. Z. Young's Anatomy department and thus encountered Chris Wylie, whom she later married. After completing her BSc degree in 1974, and spending a year studying clinical medicine, she joined Chris for a year of research and teaching at Dartmouth College, New Hampshire, an experience that made her decide on a career in academic research. Returning to London, she withdrew from medical school and registered for a PhD. She became a lecturer and, later, senior lecturer at St George's Hospital Medical School, where she and Chris worked for 12 years. In 1988, they moved to Cambridge, to become founding members of the Wellcome/CRC Institute for Developmental Biology. The lure of the USA had always been strong, and, after many summer trips to teach the Woods Hole Embryology course, the couple decided to emigrate to positions in the University of Minnesota. After 6 years there, they moved to the Cincinnati Children's Hospital Research Foundation, where Janet holds the position of Professor in the Developmental Biology Division.

Janet's research interests have always centered on early vertebrate development, in trying to understand the molecular mechanism by which an embryo establishes its three germ layers.

In the interview that follows, Fiona Watt, Editor-in-Chief of JCS, asks Janet about her experiences as a woman in science.

FMW: *What changes for women in science have you observed during the course of your career?*

JH: Remarkably few, in fact. I believe that, for the generation before me, the struggle to maintain an equal footing with men while raising a family was a truly heroic one. The changes for women in science from that period (the 1950s) to the early 1970s was much greater than from the 1970s to the present day.

Janet and Chris at University College London.

The typical role-model for women of my generation was for mother to be at home and for father to be the wage earner. In Hartlepool, it was a status symbol for the wife to be a home-maker and not to have to earn a salary. But the knowledge of how unrewarding my own mother's life appeared, after her children reached their teens, provided a major impetus for me to have a career of my own. By the time I reached medical school, 50% of the class was female, and in my first encounters with research labs there were several driving and ambitious female role models in action, including Ruth Bellairs and Gail Martin.

The legitimacy of women's case for an equal role in scientific research had already been accepted, at least grudgingly, in the British science community when I was a beginning lecturer. Since then, day-care facilities and extended tenure track periods for women have become available, at least in the USA. In 1977, when my first child was born, there was no crèche at St George's Hospital, and I had several surreal conversations with the dean of the medical school in my attempts to get one established. In England in the 1980s, it was possible to combine career and family, albeit with a struggle. Is it easier now? Not much. The competition for research funding and academic positions has increased for both men and women. The pressure to remain competitive and become established before starting a family is making women leave child-bearing until later years, when the problems of reduced fertility become all too real. When I had my children, my success as an academic was measured in large part by my teaching record and did not rely so heavily on my publication list.

When I started as a lecturer, every faculty meeting I attended was dominated by men. Unfortunately, not much has changed. The acceptance of women's equality in science has not yet resulted in equal representation. Although some groups do a good job (the Wellcome Trust, NIH study sections, the American Societies of Cell Biology and Developmental Biology), women are still in the minority on the faculty of most academic institutions, often despite positive recruiting efforts.

FMW: *How has your research career impacted on your personal life and vice versa?*

JH: My research career has undoubtedly affected my relationship with my four kids, although, since the control experiment of being at home with them was never done, I will never really know how much. Our solution to the problem of child-care was to hire a professional daily nanny. The alternative, to stay at home for several years, would have left me too out-of-touch to be competitive or confident as a teacher and scientist. The gamble paid off, in that I was able to maintain my career path and, so far, none of our children has expressed any regrets at my abandoning them each day. The fact is that our relatively crazy lifestyle was the 'norm' for them and they have all grown up into happy and well-adjusted adults.

As scientists, Chris and I have had the freedom to travel and work abroad, a benefit that does not come so easily in most professions. This, together with the fact that English scientists were so poorly paid in the 1990s that we could barely make ends meet, led to our move

to the USA; a huge positive step for the entire family.

My personal life has been the deciding factor in my career, since I would probably have become a physician had I not met Chris. Because we work together, moving to different places has always been an adventure, rather than a challenge. Having four kids made me pretty efficient at work and gave me an easy way to put aside job-associated worries. I always had a heightened appreciation of my time with them because it was so limited. Home life was, in general, peaceful, since it was seldom worth getting angry about petty things. I drew the line at leaving home for most meetings when the kids were small, and so I missed out on the more social occasions in science for several years, although I don't regret this.

FMW: *Do you feel that being a woman is an inherent advantage/disadvantage for a career in science? Why?*

JH: There is no easy answer. Life in science clearly *is* more disrupted by child-bearing and child-rearing for women than men, and so there is an inherent disadvantage. It is an advantage in some ways to be in the minority, since one is more likely to be remembered among the many men. However, as far as science itself goes, our job is to do experiments, and the experiment either works or it does not work, irrespective of the gender of the scientist. And children are wonderful, however badly your experiment goes, or however small your salary.

FMW: *What are your remaining career ambitions?*

JH: To fully understand the regulatory networks underlying germ layer formation. To retire before arthritis or senility take over, and not to end up a desk-bound scientist.

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*Feedback on our series of **Women in Cell Science** articles is always welcome and should be e-mailed to wics@biologists.com*

Bias against women in higher scientific positions?

I read the recent Women in Cell Science interview featuring Joyce Taylor-Papadimitriou (*J. Cell Sci.* **3**, 371-372) and as a female scientist just starting my first post-doc it brought some questions to mind. She mentions that 'although women make up 50% of the work force at the bench … there are few women in the decision making positions'. Is this because of a bias against women in these positions or is it simply that not as many women apply? Are the percentages of women and men who have completed a post-doc and apply for these positions the same or do a disproportionate number of women scientists choose alternative scientific (or non-scientific) careers? If there is a bias against women in higher scientific positions that is one issue, but if not as many women choose this career path as men then the percentage of women and men in these higher positions doesn't need to be the same. If fewer women apply for decision-making positions, then maybe one needs to address this issue. Is it because of a lack of confidence in obtaining these positions, because the majority of women don't want to be in these positions, or for various other reasons? I am wondering whether the increased percentage of women in science at the PhD and post-doc level needs to be (or should be) reflected by a proportional increase in the percentage of women in decision-making positions in order for one to say that progress is being made in this area.

Heather Thompson

Response

Dear Dr Thompson

I think to answer the questions you raise is difficult without some statistics. I personally would think a combination of factors influences the final ratio of women to men in the different positions. If we start at the top, where many positions are not advertised or, if they are, only to meet the formal requirement, people are head hunted. It is more than likely that there is more head hunting of men than women for these positions – directors of institutes, government advisory positions … that sort of thing. These lead to other decision-making positions on executive boards of companies, etc. As for professorships, again I think people are approached, or positions may be created or tailored for an individual, and again probably fewer women are approached than men. Also there may be some prejudices in choosing heads of departments in universities.

Lower down the chain, where the appointment to a head-of-laboratory-type position depends solely on selecting applicants applying to an advertisement, the parameter of the number of women applying almost certainly influences the ratio. From what I see in institutes in the UK and in non-professional positions at UK universities, which are less political, there are a considerable number of women in these positions. The decision making here is at the scientific level, not so much on policies.

The above is a personal view, which may be less representative of the real situation than I would like, but it should generate more discussion.

Kind regards

Joyce Taylor-Papadimitriou

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