

# Becoming immortal – genes, memes and dreams

Robert J. Sternberg has some encouraging words for those who feel they aren't making a difference

When I was 25 and in my first year as an assistant professor, I had high hopes of becoming immortal. Obviously, I did not expect to live for ever physically, but I dreamed that I would be one of those psychologists whose work would live on for ever – who would continue to be cited long after I was gone. That was then. At 62, I am not disheartened, but chastened, in my thinking.

In my 30 years of being a professor and then also a center director (in psychology at Yale University), and in my seven years of being an administrator (first as a dean of arts and sciences at Tufts University and now as a provost and senior vice president at Oklahoma State University) as well as a professor, I have come to see things differently. I have seen that, as soon as a faculty member would announce that he or she was retiring, it was almost as though that faculty member had ceased to exist. Oh, people were nice enough, but it was as though the professor's name had been crossed off the list of 'people who make a difference to the field'. I then discovered that, even among the greats, within a few years of their retirements, they were hardly

cited at all. It was almost as though they had never existed. When I look back on my introductory psychology textbook of 1968 and compare it to introductory texts of today, few of the scholars cited then are cited any more; the ones that are, for the most part, are mentioned only in the context of the obligatory brief history of the field in the first or second chapter of the text. Many of the substantive issues on which



Robert J. Sternberg is Provost, Senior Vice President, Regents Professor of Psychology and Education, and George Kaiser Family Foundation Professor of Ethical Leadership at Oklahoma State University

they did their research are no longer seen as current. Even those investigators who are mentioned in more than historical ways, such as Freud, Piaget and Skinner, are mostly subjects of criticism for their now seemingly outdated approaches to their fields (e.g. Freud, 2011; Piaget, 2001; Skinner, 1976).

In my own case, I had hoped to help bring about the day in which conventional standardised tests, which I have argued are exceedingly narrow measures of human potentials and achievements (Sternberg, 1985, 1997), would be laid to rest. I have not yet totally given up hope! Current tests emphasise primarily memory for, and analysis of, knowledge base. Such tests show one's grasp of that area of achievement. But the kind of academic thinking required on such tests is a narrow base on which to predict later job and life success. I had hoped that conventional tests (in the UK, A-levels, in the US, SATs and ACTs, among others) would be replaced, or at least supplemented by, assessments that are much broader in scope and that measure the important skills of creative, practical, wise and ethical thinking, skills that current tests barely tap. Others, of course, share my hope (e.g. Gardner, 2006; Renzulli & Reis, 1985).

Active citizens and leaders need all these skills (Sternberg, 2003; Sternberg et al., 2011). They need *creative* skills to generate new ideas and to adapt to novel environments (e.g. what will happen if parts of Britain secede, i.e. achieve independence? How can I survive if I fail to get a job or lose the one I currently have?); *analytical* skills to ascertain whether the ideas are indeed good ones (e.g. is it a good idea for parts of Britain to go their own way? Do I have skills that would enable me to succeed in another occupation if I had to find another kind of work?); *practical* skills to implement their ideas and to persuade others of their value (e.g. how would a secession of parts of Britain actually occur? How can I persuade an employer to hire me?);

and *wisdom-based* and *ethical* skills to ensure that one's ideas help to achieve a common good, or at least a good that transcends oneself and one's family and friends (e.g. is it in the best interests of all of the people of Britain for a secession to occur? Am I making the world a better place through my job and home life?)

Relatively narrow standardised tests have become more entrenched in both UK and US cultures. In the end, I went into academic administration in large part because I hoped that, through administration, I could change education and the world in a way that I seemed not to be able to do as a professor. I've had some, if limited, success. For example, at Tufts we changed the way we admit students to incorporate explicit measures of creative, analytical, practical and wisdom-based skills (Sternberg, 2010). At Oklahoma State we are moving to admit, assess and teach students in ways that reflect their broad potentials to make a positive, meaningful and enduring difference to the world.

I suspect that I am one of many aging faculty members and administrators who have come to terms with how hard it is to change the world and how slowly even small changes are to take effect. My undergraduate advisor, Endel Tulving, once warned me that change was slow – I just did not realise how slow. So I offer to those younger than I the three lessons I have learned about how one truly does make a difference, and how one can become immortal.

The first – what I somewhat glibly referred to in the title of this essay as 'genes' – is through our children. I believe our greatest contribution to the world is through our children because we, or at least our genes, literally live on through them. We have of course come to understand the tremendous effect environment has on children's development (see Sternberg & Kaufman, 2011), so even adoptive parents can take pride that the environment they provide can interact with someone else's genes to produce an individual quite distinct from

who that individual would have been if raised by someone else. In our own case, we have triplets among which are two identical twins with identical genes. We have been amazed to discover how different their personalities have come to be in just the year that they have been alive. My two children from a previous marriage have taken remarkably different paths. I know that I will be 'immortal' through my children and through their children and their children's children.

The second path to immortality is through memes. I expect that, as for most professors, citations to my work will drop off quickly after I retire, if not before. But the work of all those scholars is not in vain. Fields of knowledge build upon the work of the past, even when they butt up against that past work. Eventually, past work becomes so embedded in current Zeitgeists that it is not even directly cited. One can write about behaviourism without citing John Watson or B.F. Skinner (e.g. Skinner, 1976; Watson, 1997), but one cannot write about behaviourism without having been influenced by their ideas. The same could be said for cognitivist researchers with respect to George Miller, Herbert Simon and Ulric Neisser (e.g. Miller et al., 1986; Neisser, 1967; Newell & Simon, 1972). Cognitive therapists may not think every day about Aaron Beck or Albert Ellis, but their everyday work is inevitably influenced by these early pioneers (e.g. Beck, 1967; Ellis, 1975). In my own field of intelligence, whether or not one cites Alfred Binet, Sir Francis Galton, or Charles Spearman, their work influences almost everything researchers, teachers, and practitioners in the field do (e.g. Binet & Simon, 1916; Galton, 1869; 1883; Spearman, 1927). The greatest compliment to ideas is when their authors no longer need to be cited because those ideas have become so much a part of the way fields look at how people see the world and what they do. So one's work, however modest, lives on, not necessarily through direct citation, but rather through the contribution of its memes to the current and future

paradigms through which researchers, practitioners, and teachers work.

We further contribute our memes through our teaching, preparing future generations to do the work we have left unfinished. As I've said to my students, their job is not to become true believers in current ideas, including my own, but rather to use those ideas as springboards for the ideas that will characterise the progress to be made in the future by their generation. When I teach a class, I often wonder whether I am having any long-term effect at all, and it is always gratifying occasionally to hear from students of many years back and to discover from them, belatedly, just how much influence I had.

The third path to immortality is through one's dreams. If you have great ambitions that are not quite realised, or are not even realised much at all (as in my case), you can be comforted by the fact that change is slow and that there is a reasonable chance that, in the future, what is now a dream to you will be a reality to others, perhaps not yet even born. As a child I used to read the original Tom Swift science-fiction novels. Many of the ideas that then were science fiction are merely ordinary science today. To the extent that we can be happy to know that someday, perhaps in the distant future, our dreams will be realised, even if we do not get full or even any credit for their realisation, then we can find hope in the small contribution we have made to that future. Someday, I'm confident, educators will realise how much more there is to people than scores on narrow standardised tests. They will recognise in their assessments as well as in their teaching that it is essential to develop and reward creative, practical and wisdom-based skills as well as memory and analytical ones.

Careers in psychology easily give rise to discouragement. Academics, for example, often receive negative reviews on their articles, books, grant proposals, teaching and talks. Practitioners watch as patients relapse or even occasionally sue their therapists. Administrators often feel that no matter what they do, someone ends up being out of sorts and even angry. At times, I suspect most of us wonder at how different reality has proven to be from the gilded images we had of the positive difference we could make through our work. Yet, the world does change through our work, even if in slow and sometimes imperceptible ways. We can make a positive, meaningful, and lasting difference, and even become immortal, through our genes, memes and dreams.

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