

# **Valerie Racine's Commentary on "Enhancement, Anti-Aging Medicine & Life-Extending Biotechnologies"**

Commentary On

Case: Enhancement, Anti-Aging Medicine & Life-Extending Biotechnologies

Life-extending technologies and anti-aging medicine are emerging areas of focus among bio-gerontologists and molecular biologists. This research is sometimes divided between “weak” life-extension research and “strong” forms. The former label describes biomedical research aimed at preventing and treating common diseases, which occur in older individuals, such as certain forms of cancer, whereas the latter refers to slowing down or stopping the aging process and increasing the average human lifespan in a relatively quick and significant way (Partridge & Hall 2007; Partridge et al. 2009). Not surprisingly, it is the latter, “strong” sense of life-extension or anti-aging research that has provoked most ethical concerns and discussions. Some of these ethical concerns have to do with the prospects of sustaining increasing populations and shifting demographics, which could lead to drastic alterations of social and economic structures, such as the feasibility and implementation of social security policies or the provision of healthcare, the disruption of social arrangements and human relationships (e.g. family structures, rates of marriage and divorce, reproductive and child-rearing practices), and the persistence of tyrannical governments or the slower rate of social change and social progress (Fukuyama 2003; Binstock 2004).

Many of these concerns have to do with justice and fairness (i.e. the fair distribution of benefits and burdens in society), and will have consequences for individuals, society, and the environment. Additional ethical and epistemological questions have been raised about the appropriate goal of biomedical research and healthcare (e.g. whether extending life is or ought to be a goal of biomedicine), and the meaning and value of aging and its implications for our notions of human dignity and identity, and our claims to human rights (Partridge & Hall 2007; Gems 2003). Critics of anti-aging interventions, such as Leon Kass, former chairman of the President’s Council on

Bioethics under President George W. Bush, Daniel Callahan, a bioethicist, and Francis Fukuyama, a political scientist, oppose the measures, albeit for different reasons. Kass and Fukuyama take issue with interfering with the natural life cycle, or the traditional human life expectancy. They think these interventions will disrupt the natural order and compromise the value of the different stages of human lives. Callahan is more concerned with consequences of social unrest or social strife that could result from increasing human lifespans, such as the radical changes to our social institutions, notions of personal identity, and economic structures (Turner 2004).

Advocates, such as Aubrey de Grey, scientist and founder of the “Strategies for Engineered Negligible Senescence” (SENS) Research Foundation, claims that the right to live is a fundamental human right, which translates into a moral duty for the medical community to pursue research into life-extension technologies and anti-aging interventions (de Grey 2005). In other words, he argues that the moral obligation to save life in medicine is the same as the duty to extend it (Partridge & Hall 2007). Meanwhile, research into these technologies and interventions are being pursued and, while scientists claim that we are still far from immortality, or even expanding lifespans to 150 or 200 years, political scientist Robert Binstock, as well as others, have argued that anticipatory deliberation concerning the social impact of these measures should be actively pursued (Binstock 2004; Juengst et al. 2003). For example, Binstock argues that we should think about how these interventions will be fairly allocated, if and when they come about. And furthermore, he claims that the scientists involved in this research, along with social scientists and ethicists, should be proactive in shaping and constraining some of the social and environmental ramifications that may result from these interventions (Binstock 2004).