



# Dupont Summit 2017

*Science, Technology, and Environmental Policy*

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## **Presentation**

### **“Eco-Enlightenment vs Eco-Catastrophe: Environmental Equity and Evolutionary Engineering”**

It is now apparent to most people that climate change is having serious negative impacts on ecosystems and human health and well-being as well as generating economic and political instability. It is also becoming appreciated that the serious negative impacts of climate change are being most immediately and significantly felt by those populations that have contributed the least to the problem and have the lowest capacity to deal with the consequences. The global atmospheric/oceanic/terrestrial sink for carbon dioxide emissions (the primary contributor to climate change) represents just one example of an eco-system service that is inequitably shared, so climate change is only one aspect of a more general problem of global environmental injustice, namely the inequitable distribution of all eco-system services. This inequitable distribution is the result ecological colonialism (eco-colonialism) from unfair trade in ecosystem services in which vital resources are imported to the developed countries from the developing countries and unwanted wastes are exported from the developed to the developing countries. This not only exacerbates the poverty trap of developing countries precluding hopes for their sustainable development but also represents a real threat to human health and life of current and future generations, in essence perpetrating global ecological genocide (eco-genocide). We should all feel an ethical obligation to prevent this eco-catastrophe, but in order to accomplish this we will need an eco-enlightenment in which our desired ethical footprint is more closely aligned with our ecological footprint. However, as a species we suffer the dilemma of a mis-match between our Paleolithic genome with it concomitantly evolved, locally circumscribed moral consciousness now stranded in a global, post-modern technologic world. Thus, it has been noted that we evolved moral intuitions that give us rapid but rigid answers, automatic “point-and-shoot” responses, that work reasonably well for proximate, known, immediate and common face-to-face situations but that fail for more distant, unknown, faceless and complex situations such as the environmental injustice of eco-colonialism. Can/should/must biomedical engineering contribute to an enhanced evolution of our moral reasoning to achieve the new eco-consciousness necessary for fair and sustainable global environmental equity?

*Speaker*

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