The 20th century was dubbed the Century of the Gene and the 21st century is likely to upstage its predecessor in that regard. I’ll present theoretical and empirical research that addresses the effects, termed the Genetic Essentialist Biases, which are elicited when individuals encounter arguments propagating the relevance of genes for specific behaviours, conditions, diseases, and social groups. Research on people’s understanding of social categorizations such as race and gender, as well as their comprehension of the aetiology of health and behaviours is revisited through the lens of these effects leading to a discussion of a specific potential candidate designed to minimize these biases. This candidate, which highlights the interactions between nature and nurture, happens to be the focus of the second part of the talk in which research on the effects of such interactions between a specific gene (APOE) and personality factors are shown to affect cognitive function and Alzheimer’s disease prevalence among older adults.