Gerontechnology starts at birth and even earlier

J.E.M.H. VAN BRONSWIJK. ***Gerontechnology starts at birth and even earlier.*** *Gerontechnology 2014;13(2):173;* doi:10.4017/gt.2014.13.02.021.00 **Purpose** This paper elucidates gerontechnology's role in the prevention of chronic conditions. Gerontechnology has evolved from technology for aging[1] to a scientific domain at the crossroad between gerontology and technology (*Figure 1*). It fosters the cross-fertilization of engineering and design[2]. To reach a good quality of life up to the highest possible age, discovering and implementing the best person-environmental fit is crucial in gerontechnology's mission, not only for older adults but for people at earlier ages, when chronic conditions start to develop. In fact, when frailty starts, gerontechnology has not completed its preventive mission. **Method** Two-fold desk research on (i) environmental influences associated with the development of chronic conditions and (ii) on the different theories and paradigms in technology and gerontology may help to provide the best environmental fit. **Results & Discussion** A high number of environmental conditions appear related to chronic conditions. For example, indoor air quality, noise levels, food habits, and the continuously lowering level of exercising during the course of life are all related to the Dutch health profile 'frailty', which is described as mainly a combination of chronic airway disease, diabetes mellitus, and hearing impairment in a health-scenario study[4]. The base of these conditions is laid in childhood and could largely be prevented with proper public health engineering. Although most gerontechnology projects aim at supporting older frail adults, the available theoretical and empirical knowledge (*Figure 1*) allows for a more sustainable option: preventing or postponing the chronic conditions through healthy exposures starting at birth or conception.

References

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Address: Eindhoven University of Technology, Eindhoven, Netherlands
E: J.E.M.H.v.Bronswijk @tue.nl

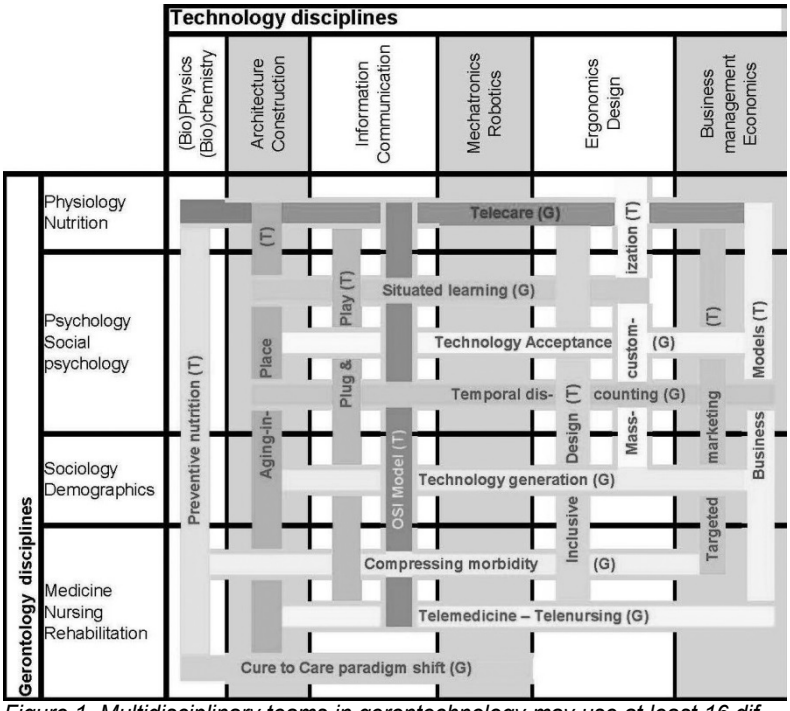

Figure 1. Multidisciplinary teams in gerontechnology may use at least 16 different technology or gerontology theories and paradigms to support gerontechnology research, engineering and design for prevention and intervention[3]