The Human Memome Project: text-data analytics to find socio-cultural predictors of longevity utilising the quantified self, crowdsourcing and citizen science communities

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Socio-cultural markers such as attitudes, behaviours, ideas, aspirations and interests were collected and correlated to previously identified social, psychological and quantitative predictors of lifespan. Attitudes to whether a person wanted to live for as long as possible and if so in what condition were also surveyed.

The aim of the study was to identify trends, correlations and multivariate, interdisciplinary markers of health that contain word and phrase based socio-cultural markers as well as other known longevity markers. This would lead to enhanced accuracy in predictions of current health states and longevity predictions.

Text-data analysis was chosen to find novel longevity markers, as text-data is easily surveyed, available, digitised and sequence-based. As more than an analogy to The Human Genome Project, The Human Memome Project sets out to record personalised text-sequence data for individuals to be able to correlate particular text-sequences to specific health markers associated with longevity. Data was gathered from over 300 participants, 25 countries, 6 continents, in an 18-70-age range.

We have attempted to use varied statistical analysis and computational modelling techniques to build optimal sets of attitudes, behaviours and interests that correlate the most with longevity and find text-sequences that are correlated the most or least with longevity.

This project presents a proof-of-principle experiment that could be developed into advanced technology platforms, big data analysis, predictive analytics and personal health tools for the healthcare, preventative medicine and global, local or personal, real-time longevity risk analysis.

The Human Memome Project also presents a key engagement with the crowd sourcing, citizen science and quantified self communities for research into longevity.