

## 42 – ANSWERS TO QUESTIONS WE’VE NEVER ASKED

or

### WHAT MAN CAN AND WHAT MAN CANNOT DO

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42 is the answer to the ultimate question of life, the universe and everything. Douglas Adams in his *Hitchhiker's Guide to the Galaxy* had the answer calculated by the supercomputer Deep Thought after seven and a half million years of thought. This shocking answer resulted in the construction of an even larger supercomputer, named Earth, which was tasked with determining what the question was in the first place – unfortunately Earth is destroyed to make room for an interstellar highway just before the task is solved (in addition, there was a software bug in the first place, which would have rendered the outcome anyway). *Big data*, the massive data-collecting and consumer-profiling of information effort of the decade is not primarily a business or research revolution, but a social one. In the past decade, we have allowed machines to act as intermediaries in almost every aspect of our existence, leaving behind a vast cloud of bits and bytes (Seife, C. *Nature* 2015, 518:480-1). Google, Facebook and Apple built empires on gathering, analyzing and commercializing depths of personal data. From these data one might draw certain conclusions, i.e. “Google Flu Trends” analyzed the frequency of search terms related to “the flu” to predict influenza activity and disease spread (Ginsberg, J. *Nature* 2009, 457:1012-4). Subsequent analysis however revealed serious deviations, probably resulting from the commercial outlay of the project (Marx, V. *Nature* 2013, 498:255-60). While one might make the argument that these problems can be overcome given the right questions are asked right, one conceptual problem remains: nothing truly new can be created from data collected in the past. Although we do know that something is going to happen at the NYSE – but when, nobody is able to predict (Kahneman, D. *Thinking, Fast and Slow*). Similarly *Big data* will not be able to give us a clue to the etiology of neurodegenerative disorders such as Alzheimer’s disease, at best we might hope for something similar as Ariadne’s thread. The scientists’ inventive genius to ask the right question, built a hypothesis, pursue the idea relentlessly and recklessly, with the help of all modern techniques – that is what might eventually bring us closer to the cure for this devastating disease.