

Decision making under Uncertainty – It's all in the Functions of the Mind!

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Abstract

In his presentation to FRAMily 2017, – Walking in Tokyo Station - , Hideki showed that the way people decide how to navigate such a chaotic environment, could be modelled dynamically, using FRAM functions. He also demonstrated that these thought processes, could be envisaged as a hierarchy of decision functions which, in sequence,

- control movement,
- monitor the environment,
- work out short term, (rapid response)Tactics, informed by
- more well thought out, Strategies.

This illustrated a new and potentially very powerful approach to modelling how brain functions work together, which has distinct advantages over conventional “wet” physiology, clinical imaging, digital computing analogues and abstract psychological theorising or empirical experimentation. The simplicity of just looking at function not detail, makes modelling much simpler and tractable.

Using this modelling approach, we have shown that this “Tokyo” decision hierarchy fits well with the classic evolutionary (Triune) model of how the brain functions developed and still interact and interfere.

It also explains why some of the most influential work of Kahneman and Tversky makes sense and how observations such as the “chimp paradox” can be explained.