Review of: "The Algorithmic Philosophy — A Synthetic and Social Philosophy"

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This is an interesting article, and it is important to address the issue of thinking in relation to the accelerating roles of intelligent machines. However, the programming of such a complex activity as human mental processing is a huge task. Not only is there the complicated link between thinking, language, and emotion, which the brain amygdala organises, but there is the whole basis of thought itself to consider. *Possibilism* refers to many available possibilities. Philosophers, from Diodorus Cronus to Daniel Dennett, argue for only *one* possibility - *Actualism* – also called *determinism* & *eliminative materialism*. It connects to a mistaken belief, held by some physicists, that information is a *conserved quantity*, like matter and energy. Information philosophy shows content has expanded exponentially since the universe began. Cosmic creation allows *negative entropy* (less disorder) for *information structures* like galaxies, stars, and planets to increase. David Lewis, a language philosopher, investigated the logic of *many possible worlds* (proposed by Gottfried Leibniz), differing from ours, to examine ideas like *truth & falsity, necessity & contingency, possibility & impossibility*. David Lewis, developed *modal realism*, claiming that for every contradictory statement there is a possible realm where it is true. David Layzer says infinite places exist where any possible situations are being realised, as globalisation reveals. This is a cosmologist's view of *possible worlds*, but Actualists deny possibilities. Aristotle asked whether the statement: "*There will be a sea battle next week*" was true or false. Actualists argued that its truth dictates future happening. Thinking varies hugely from personal experiences and cultural background to influence *free will* and behaviour. This is the theoretical ability to choose between different possible actions unhindered, linked to moral responsibility, culpability, endorsement, and other judgements.

In solving freewill problems, determining action to produce *alternative possibilities* is the first step. The second is evaluation and third the selection of one consistent with and statistically determined by personal motives, reasons, feelings, etc., as *compatibilists* insist (those believing *free will fits with determinism*). What becomes of possibilities not realised? Jean-Paul Sartre said they become "nothingness". Claude Shannon's *Information Theory* requires multiple possible content or nothing original is communicated. Without "surprises" new information is impossible. Without possibilities, content, views and values cannot be created and communicated. Chance, in quantum physics, is the base for possible thoughts popping into our heads when evaluating alternative possibilities. Two-stage models, forecasting error, claim brain quantum noise generates new thoughts for action. They do not direct responses, which result from evaluation of possibilities, subsequent debate, and choice governed by character (beliefs, values, customs, desires & motives). This makes us responsible for right actions in a context, with awareness of consequences. In present culture, when other possible views are cancelled and do not count,

It is vital to unpick these hugely complex issues influencing thinking in a way that is relevant and meaningful. This background would seem important to then elaborate how it could be brought into a computer programme.