

# Review of: "Artificial Life from Talos to Qubit"

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The paper is well described with a connection between ancient technologies and recent SOTA techniques. However, there are some points that need to be addressed:

1. Regarding the sentence "Machine to evolve like human beings" - there's an evolving field called "lifelong learning or continual learning" that tries to address this by designing algorithms that try to learn from an ever-changing environment.
2. The author mentions that "Classical computers use classical algorithms that are not sufficiently fast enough in creating a necessary complex environment for an automation entity to appear." I don't completely agree with the author's perception; there are various scenarios where an artificial agent interacts with its environment in a somewhat automated manner, and a dedicated branch of machine learning called reinforcement learning deals with these scenarios. Also, current classical computers have achieved a lot in terms of independency, be it the self-driving cars from Tesla or the social robots designed to interact with humans (to name a few).
3. The sentence "the bits depend on the direction of the current" is not correct. In classical computers, the bits (0 or 1) are the respective state of the transistor, and the direction of the current has nothing to do with it.
4. One of the main benefits of the quantum computer will be its high computational power (which the author also mentions), and with a very small number of qubits (e.g., a 1024-qubit system can have  $2^{1024}$  combinations), it can easily solve complex problems within a small time. However, the quantum computers at the current stage are very noisy but will for sure improve in the coming years.