

Robotics and Philosophy

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ABSTRACT

It is common for philosophical contemplation surrounding robotics to focus primarily on issues concerning consciousness, self-awareness, and morality. The topic concerning the engineering capability to create robotic devices is taken for granted, regarded unquestionably as a natural outcome of technological progress. Nevertheless, a more thorough examination of the “robot-creation feasibility” problem, namely the possibility to conceive and construct versatile and reconfigurable devices which act autonomously and intentionally while interacting effectively with their environment toward accomplishing various tasks, reveals that this problem is not trivial. Its ultimate resolution lies in the realization that this feasibility emanates from the multifaceted techno-logical potential deeply engrained in the structure of nature’s lawfulness. It is within this framework that I will outline my thesis that the basis which renders possible the fabrication of robot systems, similar to living beings with or without human features, comprises primarily a tripartite platform combining the exploitation of two properties of natural reality – (1) the existence of suitable triadic structures, and (2) the availability of a multitude of phenomena which allow for the achievement of sufficiently acceptable causal unilateralization – in conjunction with (3) a praxiological guiding principle. This principle refers to the exhortation to pursue the attainment of *accurate* operation despite *inaccuracies* associated with uncertainty. This uncertainty is structural and is related to the unavoidable approximation inherent in any given modeling venture. It is further burdened by the undeclared dynamics interwoven with the multiplicity of physical theories corresponding to possible worlds affine to our own familiarly unfamiliar one. The successful utilization of these properties by the progressively more vigorous scientific technology, gradually leads to the highly promising robotic revolution, which is expected to play a profound role in the evolution of humanity.