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Towards a New Science for Autonomous Manned Space Exploration

Abstract: Long duration human exploration of the solar system calls for a stable contribution from different communities of organized expertise and singular emerging know-how. The challenge of such a project appears to be technological, but designing a reliable socio-technical system for international astronaut explorers is a problem of integrating validated heterogeneous knowledge into an open interdisciplinary civilizational repository guided by humanizing value. In our paper, we will show that the human species can develop a form of collective intelligence using a paradigm that reintegrates a phenomenology of the living which is relatively different from the traditional process of scientific objectification. To support this hypothesis we will show the epistemological limits of constituted science and more particularly of modern physics. We will draw the relationship that exists between the evolution of theories in the human sciences and quantum physics while insisting on the role of culture as a catalyst for a always possible evolution of the Human being (conscious and free). Going beyond the previous science and reintegrating the living observer could allow to increase the horizon of human and technological possibilities in response to the new challenges that are emerging present on a global scale. We will focus on the need to activate natural intelligence with a methodological cycle that develops and maintains a continuous process between the subjective and objective poles of the human being in gestation. As a prerequisite, this process requires recognizing the human species qualities as well as its potential. Operationally this path requires mutual listening and shared responsibility of partners with a focused on the delegation process centered on the human being in the making in an extra-planetary perspective.

Keywords: cooperation, autonomous systems, phenomenology, quantum physics, enactment, potential, natural and emotional intelligence.