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TOWARDS A CONSISTENT HUMAN 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 with the example of bio-astronautic programs. Actual Human medical programs on Human Space-flight have developed significant knowledge on the physiological changes of the Human body for short-term space flights, but autonomous long duration missions with long range destinations fixed some bio-ethical, psychological and medical challenges that need an integrated approach on Human Health and Sanity (Planetary Anthropology). We will show some results and implications of the IODA (CNES) and VIBES research experimentations which allows the possibility of an alternative approach to developing and maintaining the health of astronauts in the case of long-duration missions. We will insist on the role of culture as a catalyst for a always possible evolution of the Human being (conscious and free). The need is 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.