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Contemporary Arts Practice and Outer Space: A Multi-Disciplinary Approach (4)

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HUMANLY SPACE OBJECTS - PERCEPTION AND CONNECTION WITH THE OBSERVER

**Abstract**

Expanding humanity to space is an inevitable step in our quest to explore our world. Yet space exploration is costly, and the awaiting environment challenges us with extreme cold, heat, vacuum and radiation, unlike anything encountered on Earth. Thus, the few pioneers who experience it, need to be well protected throughout their spaceflight. The resulting isolation heightens the senses and the increases the desire to make connections with humanity and with any other manifestation of life. Such connections may occur via sensory inputs, namely vision, touch, sound, smell, and taste. This then follows the process of sensing, interpreting, and recognizing familiar patterns, or learning from new experiences. The desire to connect could even transfer to observed objects, if their movements and characteristics trigger the appropriate responses from the observer. When ordered in a familiar way, visual stimuli from lights and movements of an object may create a perceived real bond with an observer, and evoke the feeling of surprise when the expected behavior changes to something no longer predictable or recognizable. These behavior patterns can be designed into an object and performed autonomously in front of an observer, in our case an astronaut. The experience may introduce multiple responses, including communication, connection, empathy, order and disorder. While emotions are clearly evoked in the observer and may seem one sided, in effect the object itself provides a decoupled bond, connectivity and communication between the observer and the artist-designer of the object. In this paper we will provide past examples from the field of arts and other domains, including robotics, where human perception through object interaction was explored, and investigate the starting point to new artistic design concepts and future prototype designs, which extend these experiences beyond the boundaries of Earth, while taking advantage of remoteness and the zero gravity environment. Through a form of artistic expression and design, these concepts will focus on the connection and brief emotional bond between a humanly animate object in space and a co-located observer in spaceflight. Beyond the artistic expression, these experiences may also provide further insights into human perception in spaceflight, and could be exhibited on the International Space Station.