Paper ID: 115264
oral

37th IAA SYMPOSIUM ON SPACE AND SOCIETY (E5)
Interactive Presentations - 37th IAA SYMPOSIUM ON SPACE AND SOCIETY (IP)

Author: Ms. Christina Balomenaki
Technical University of Crete, Greece

IDENTIFYING THE 'SENSE OF PLACE' AND ITS IMPORTANCE FOR HABITABILITY IN EXTREME ENVIRONMENTS

Abstract

In extreme and unfamiliar environments, such as space habitats or polar research stations, the human need for orientation and psychological grounding becomes critical for long-term habitability. This paper investigates the concept of "sense of place" as a fundamental mechanism through which individuals establish the sense of "belonging" within spatial conditions that are initially perceived as fluid, unknown, and disorienting. This understanding resonates with Christian Norberg-Schulz's concept of "sense of place" (genius loci), which defines places through their unique, experienced, and tangible characteristics rather than merely as abstract or functional space, arguing that architecture should reveal the "spirit" of a site in order to foster a meaningful human connection with the environment. The research hypothesis is based on the concept that the "sense of place" emerges through the interplay between the notion of "familiarity" and "narration". "Familiarity" is investigated as a spatial "anchor"—a local referential point that enables gradual cognitive and emotional navigation into increasingly unfamiliar surroundings. It is examined beyond mere recognition of objects and is instead understood as a system of archetypal signifiers of shapes and forms that provide immediate spatial legibility and comfort. "Narration" is investigated as a phenomenological layer, evident through the "traces" - the material imprints of human presence and activity over time - introducing a temporal and experiential dimension to the environment. The research goes beyond the scope of the effect created by isolated familiar objects, which may only sporadically exist in current habitats, toward a broader environmental framework where familiarity and narration is intertwined and spatially distributed, leading to the emergence of the sense of place. Through a case study that took place at the Bulgarian Antarctic base, where visual and spatial analysis was employed to deconstruct everyday environments into distinct layers, identifying signifiers linked to both archetypal forms and accumulated traces of human presence. By examining how these elements intertwine, the research seeks to reveal the mechanisms through which sense of place is produced and perceived. Ultimately, this investigation underscores the importance of designing environments that support psychological/emotional anchoring and continuity of experience. Understanding how familiarity and narrative operate as complementary spatial mechanisms becomes essential for sustaining human presence in extreme environments—particularly in the context of long-duration space missions, where the construction of belonging directly impacts well-being and performance. The ultimate objective is to design habitation environments that evoke the familiarity of home while cultivating a meaningful and enduring sense of belonging.