

Inhabiting Foreign Worlds

Liquifer Systems Group

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1968 saw the world premiere of *2001: A Space Odyssey*. Directed by Stanley Kubrick with a screenplay by Arthur C. Clarke, this visually innovative, gripping cinematic masterpiece told of a distant future within our solar system and even beyond, evoking for viewers a time suspended between utopian and dystopian visions. Little more than one year later, on July 20, 1969, millions of people gathered around their televisions for a live broadcast that gave rise to yet another set of iconic pictures: Neil Armstrong and Edwin "Buzz" Aldrin became the first human beings ever to walk on the moon. Both events happened in the years around 1968, a time of radical social change and one that also brought a groundswell of interest in participatory, ephemeral performance art "happenings" and Fluxus. The two worlds collided in May 1970, when NASA experienced Robert Irwin's (US, b. 1928) own explorations of light, space, and habitability.

Irwin, an artist, offered his Venice, Los Angeles studio as a venue for NASA's First National Symposium on Habitability of Environments—a significant conference on space travel organized by Dr. Ed Wortz, a habitability scientist within NASA's Apollo program and an acquaintance of Irwin's. At the time, the US and Russian space programs viewed Mars as the next logical step in human space exploration after a successful moon landing.

NASA's symposium, which drew a wide range of participants from various disciplines and from all over the world, was convened to gather insight into what it would take to build a habitable environment for humans in the context of extended space travels. While the Apollo program had been very much defined by engineers and scientists (that is, a team focused on the technical challenges of keeping human beings alive in the hostile environment that is outer space), the conference was meant to broaden perspectives. Productive exchange between scientists, engineers, architects, artists, and others would, it was hoped, paint a larger picture that could benefit future space missions.

If the notion of a symposium sounds conventional, its location was anything but: The setting Irwin conceived for this event went far beyond a traditional set-up for presenting papers. The artist intentionally designed an experience in a highly unconventional context and constellation, creating various different spatial environments for each day of the three-day conference. Attendees' expectations were rattled, as most NASA employees were accustomed to working and meeting in insulated, restricted environments. Conceived in collaboration with artists Larry Bell (US, b. 1939), James Turrell (US, b. 1943), and Jack Brogan, Irwin's spatial configuration was at once unfamiliar and uncomfortable—and characterized

by an array of physical deficiencies. Conference participants entered the building through a hole in the wall that had recently been knocked out with a sledgehammer. Passing piles of rubble, they walked down a small corridor and into a large white room that had been dimly lit with colored skylights. The room was deprived of any connection to the outside and furnished with two rows of red canvas chairs. Cushions had been placed on the floor. Arriving on the second day, participants found the space transformed: light and sound from the street entered through a large opening in the wall that had been covered with translucent paper. On the third day, the paper was removed, making the conference accessible from the street. Afternoon group discussions were held in rooms that were either too small, too big, too reverberant, too sound-dampened, too light or too dark.

Though conference participants maintained their professionalism, the environment changed their habits. By the second day, many had exchanged their business suits for casual clothing. A number of symposium attendees moved their afternoon group sessions outdoors or held them on the beach. They began to communicate differently. Their encounter with the given conference setting sparked intense dialogue about habitability. Irwin's experiment drove home the discomfort and confusion of being exposed to an unfamiliar, hostile

environment from which there is no escape. With subtle shifts, NASA guests were urged to step out of their comfort zones and approach the symposium topic from the perspective of their own, intense personal experience: that of being isolated in a space that challenged their well-being, but also their own physical, mental, and emotional reaction to unexpected, extreme surroundings. He transformed a conference into a simulation, an extreme situation that crystalized both the challenges of the unknown and its potential mastery.

The scenario bears some similarities to *Themroc*, a 1973 film by director Claude Faraldo. Like Irwin's conference venue, the film starring Michel Piccoli involves the unexpected transformation of a spatial configuration. *Themroc*, as the main protagonist is called, begins the plot as a well-performing worker at a typical factory before revolting against the everyday routine by knocking down a wall between his room and the outside world. Just as the film can be understood as an allegory for anarchism, Irwin's installation seems to encourage a questioning of conventional approaches and the need to reach for new experiences and horizons, to break barriers in a way that goes beyond what words are usually able to achieve.

Irwin's experiment reframed the conference as a conventional platform for dialogue to show the true impact

of physical space on human well-being and endurance. He highlighted the relevance of the quality of space: an aspect that—though related to feelings and therefore somewhat difficult to grasp—is nonetheless crucial for long-term human space exploration. The Irwin setting approximates a space mission setting rather well.

Making the human environment habitable is essential to sustaining any long-term human presence in space. That process—a matter of ensuring that humans not only survive, but also thrive in those surroundings—is what habitability is all about. The word “habitability” also carries within it the word “habit.” Habits contribute to a sense of being safe and relaxed. Creating a space that supports feelings of comfort and security is vital in an environment as hostile as outer space. These automatic rituals and behaviors are generally acquired long-term under certain, given conditions, but are susceptible to change when those conditions have shifted.

Once, in the late 1990s, there was a fire incident on the Mir space station. A cosmonaut later reported that his immediate instinct was to open the window—an impossible endeavor in outer space, where there is nothing but a vacuum outside. His reaction shows how ingrained such habits are. But they do evolve. Another anecdote centers around a live cockroach that

came to that same space station in a shipment of supplies from Earth. The two cosmonauts, who by that time had spent a considerable amount of time isolated on their mission, were delighted to welcome this third crew member. They cared for a creature they most certainly would have killed out of habit if it had appeared in their homes on Earth. But long-term isolation paved the way for change, leading them to appreciate something as simple as the presence of another living thing.

Irwin stated that “the symposium did not answer any questions, but it reframed the dialogue”—an approach that the artist consistently pursues with his works to this day. Reframing the dialogue is also part of human space exploration, as it drives discussion about who humans are, what they need, to what they can aspire and where they might head.