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THE JOY OF SETS PRESENTS CAPRICORN TWO: A MARS MISSION SIMULATION

Abstract

The Joy of Sets is an educational workshop series based on the activity of set-building. Primarily working in schools of art and design, it presents students with a chance to explore a rapid prototyping approach to realising ideas hands-on at 1:1 scale. The Joy of Sets champions making as not only a production process but a creative one, where thinking-through-making becomes a way of exploring scenarios and experimenting with ideas in dynamic and playful working atmospheres.

This paper discusses approaches and outcomes of a special edition of the The Joy of Sets entitled 'Capricorn Two': a collaboration between Joseph Popper, artist and workshop leader; Dr. Barbara Imhof, space architect and co-founder of LIQUIFER Systems Group, and students of the University of the Underground, Sandberg Institute in Amsterdam.

With guidance from Popper and Imhof, the students produced detailed, immersive environments out of cardboard and other simple materials, designed as stages for dedicated Mars mission simulations. The sets stood for locations on Earth and the surface of Mars, from where the students performed the different roles of the various crew members involved in the missions. The simulations were based upon Project MOONWALK analogue experiments where Imhof's team was one of the project partners. An essential part of project MOONWALK were two complex mission simulations in Rio Tinto and subsea Marseille. The different sets of Capricorn Two were connected by video-call and a 2-minute communications delay between Earth and Mars was imposed part of a strict mission protocol.

For the students, Capricorn Two was an opportunity to experience a dedicated mission in outer space based entirely on their own handmade objects and sets that they built in the studio. They were able to synthesise physical making with the enactment of an as yet unprecedented experience of human space exploration. The simulations also provided exercises in teamwork under stress and strict protocol, how to communicate clearly across the solar system. Imhof scripted unexpected emergencies for the students to respond to and improvise upon.

Bringing set building together with space mission protocols demonstrates an exciting potential of hands-on making as a form of dedicated space research. By combining mission scenarios with invention, imagination and fabrication, handmade space simulations can be an engaging and valuable form of informed investigation by speculative methods of experience design.