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THE "US VS. THEM" PHENOMENON: LESSONS FROM A LONG DURATION HUMAN MARS MISSION SIMULATION

Abstract

"Us vs. them" group dynamics have arisen and been documented in many situations, including space missions, simulated space missions, polar and military deployments. In summer 2007, the 100-day FMARS-11 Long Duration Mission (F-XI LDM) took place at the Flashline Mars Arctic Research Station (FMARS) on Devon Island in the Canadian High Arctic with a crew of seven. The purpose of F-XI LDM was to gather data for 22 scientific investigations under simulated Mars conditions including physical isolation on a remote uninhabited island, and a 20 minute communications delay. While several of these studies were related to human and psychological factors, a study on communications between the crew and mission control was not formally conducted. However, challenges in crew-support team interactions presented themselves. The purpose of this paper is to address lessons-learned from the perspective of the crew which may be useful in planning for future long duration planetary analogue missions, and crewed space missions. Anecdotal observations were made by the crew during and after the mission, and data was collected from the crew during post-mission interviews. Results presented here reflect the qualitative experiences of the crew.

The crew found that despite close ties to people on the support team, feelings of "they don't understand what we're experiencing, and how much they are asking of us" arose quickly. While such feelings did unite and strengthen ties within the crew, they led to deterioration of professional and social communications with the support team, and decreased performance efficiency. For example, as the official communication protocol with the science advisory group broke down, crew members began directly communicating with individual scientific advisers without formal structure, leading to disorganization and confusion. Secondly, personal ties with support members put strains on internal crew relationships, as such external friendships positioned individual crewmembers as on-site support advocates policing the provision of necessary information to support in a timely fashion, and provoking tensions around criticism of external support friends. Even with these challenges the mission was successful and all mission goals were met.

The F-XI LDM experience shared many features with previously reported "us vs. them" situations. These similarities strongly argue for applications to future space missions and simulated planetary missions. To that end, the lead author is currently involved with mission control operations for upcoming human/robotic Moon and Mars analogue missions at the University of Western Ontario, and will apply

the lessons listed here to future missions.