

A Philosophical Inquiry into the Role of Sexology in Space Life Sciences Research and Human Factors Considerations for Extended Spaceflight

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ABSTRACT

It is apparent, as the International Space Station becomes a reality and more nations become involved with space exploration, that human beings will live and work in space in the future and that extended spaceflight will be a reality. In the space life sciences, research has begun on animal reproduction and development, human interpersonal and cultural issues, and human performance in extreme environments such as the isolated, confined, and hazardous conditions of space. However, at least one aspect of human functioning with seemingly great potential to influence mission success has not in any detail been investigated: sexuality. Numerous questions remain about the connections between physiological and psychosocial aspects of sexual functioning, the impact of and on intimate relationships between and among men and women, and their effects on extended spaceflight mission parameters.

Using the method of philosophical inquiry, the researcher reveals the epistemological beliefs, unstated by NASA, that surround the phenomenological data about human beings in space and the potential impact of human sexuality factors. He argues that sexology must be an integral and focused part of a reconceptualization of space life sciences research and human factors considerations necessary to prepare for extended spaceflight. In addition, based on what scientists know about human beings in both space and analog environments, he conjectures about the mutual interactions of human sexuality factors on space missions. Central to the analysis is the argument that sexuality, like any other natural human function, needs to be studied scientifically so that human beings may function in the most physically, psychologically, and socially effective manner possible. In addition, he argues that sexologists can offer unique perspectives and definitive information for mission planners and policymakers who are concerned with issues related to crew selection and training for astronauts who will participate in long-duration spaceflight.

Of particular significance to the American space program was the introduction of women as astronauts in January 1978. This watershed selection group, which also included members of racial minorities, resulted in the historic flights of the first American woman, Sally Ride, on the space shuttle in June 1983 and the first EVA by an American woman, Kathryn Sullivan, in October 1984. Thus, the duality of the human sexual condition was highlighted and became an issue for which NASA had to plan. This followed years of often-heated debate about the role of women in the space program that followed the flight in June 1963 of Soviet cosmonaut Svetlana Tereshkova, the first woman in space, which had been dismissed as just a Cold-War public-relations ploy. In fact, women had been systematically barred from the U.S. space program, even though it was thought by some in the scientific community that women might be better suited, both physically and psychologically, for the severe requirements of those pioneering spaceflights. Qualified candidates had been tested as early as 1960, but political pressure and sexism prevented the most likely candidate, Jerri Cobb, from even finishing the tests, despite the earlier promising results.

The researcher proposes new terminology, the human sexuality complex, to describe the unity and interconnectedness of the diverse biomedical and psychosocial dimensions involving human sexuality factors. The human sexuality complex is the constellation of factors in which sexual functions, processes, or structures are involved in the biological, psychosocial, emotional, political, and other aspects of the lives of human beings. It is an open dynamic multiple complex systems approach that incorporates the recent application of chaos theory to psychological phenomena. The researcher argues that this perspective avoids the excesses of biological reductionism and of the social constructionism prevalent in contemporary human sexuality discourse. He concludes that sex and gender issues must be viewed from a systems perspective, and that the factors that have influenced our attitudes and policies about sexuality in space are the same as those that confound our approaches to sexuality and gender issues on Earth.

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