Space in Space: Designing for privacy in the workplace

Abstract

Privacy is cultural, socially embedded in the spatial, temporal, and material aspects of the lived experience. Definitions of privacy are as varied among scholars as they are among those who fight for their personal rights in the home and the workplace. Privacy in the workplace has become a topic of interest in recent years, as evident in discussions on Big Data as well as the shrinking office spaces in which people work. An article in The New York Times published in February of this year noted that "many companies are looking to cut costs, and one way to do that is by trimming personal space" (Barron 2015). Increasingly, organizations ranging from tech start-ups to large corporations are downsizing square footage and opting for open-office floorplans hoping to trim the budget and spark creative, productive communication among their employees. The question of how much is too much to trim when it comes to privacy, is one that is being actively addressed by the National Aeronautics and Space Administration (NASA) as they explore habitat designs for future space missions. NASA recognizes privacy as a design-related stressor impacting human health and performance. Given the challenges of sustaining life in an isolated, confined, and extreme environment such as Mars, NASA deems it necessary to determine the acceptable minimal amount for habitable volume for activities requiring at least some level of privacy in order to support optimal crew performance. Ethnographic research was conducted in 2013 to explore perceptions of privacy and privacy needs among astronauts living and working in space as part of a long-distance, long-duration mission. The allocation of space, or habitable volume, becomes an increasingly complex issue in outer space due to the costs associated with maintaining an artificial, confined environment bounded by limitations of mass while located in an extreme environment. Privacy in space, or space in space, provides a unique case study of the complex notions of privacy, the impact of design and others on achieving it, and the sensemaking that occurs when privacy is less than expected. The findings show that privacy is not just a personal, individual need but is also a need that is shared among teams and groups. Moreover, the case of space in space reveals the influence the design of the built and social environments have on privacy needs and on achieving privacy. When the level of privacy is less than expected, sensemaking occurs and the lack of privacy is dealt with by means of absencing the present, creating new social norms, and "making space" by manipulating the spatial, temporal, material aspects of the lived experience. Although the Mars habitat study represents an extreme case of privacy in the workplace, lessons learned from outer space are applicable to life in the Earth-bound workplace. A mini-case study was conducted to evaluate office space at the headquarters of a major American airline that illustrates the usefulness of building unexpected bridges between the unknown, unfamiliar Mars habitat and the everyday workplace. The comparative studies reveal insight into the interconnected, social nature of the spatial, temporal, and material aspects of the lived experience and how users of the habitat and office workspace view privacy, self, and others through an embodied, design interaction.

I.   Introduction
II.   (re)Defining Privacy
   · Overview of the subject of "privacy" in academic literature, particularly anthropological literature on proxemics, personhood, personal rights, and material culture.

III. Case Study: Designing habitats for Mars
   · Background: Research was conducted in 2013 for the National Aeronautics and Space Administration (NASA) to explore perceptions of privacy and privacy needs among astronauts living and working in space as part of a long-distance, long-duration mission. NASA recognizes privacy as a design-related stressor impacting human health and performance.
   · Methods: Given the need to explore perceptions of privacy as well as behaviors among a limited, *future* population, research methods used in the study were selected so that triangulation of the results would contextualize an analogous populations' behavior and their perceptions of privacy. I was selected as a member of the inaugural Human Exploration Research Analog (HERA) crew, HERA-1, which offered the opportunity for direct participant observation of a space analog crew.
   · Findings: The allocation of space, or habitable volume, becomes an increasingly complex issue in outer space due to the costs associated with maintaining an artificial, confined environment bounded by limitations of mass while located in an extreme environment. The findings from this study illustrate the complex notions of privacy, the impact of design and others on achieving it, and the sensemaking that occurs when privacy is less than expected.

IV.   Complexity of Privacy
   · Privacy is a shared (team) need, not only a personal need.
   · Privacy is cultural, socially embedded in the spatial, temporal, and material aspects of the lived experience.
   · Privacy is impacted by design, of the built environment and the social environment.

V.   Making-Sense & Making Privacy
   · When privacy is less than expected, sensemaking occurs in the built and social environment and dealt with by means of:
      · Absencing the present, "checking out"
      · Creating new social norms
      · "Making space" through manipulating the spatial, temporal, material aspects of the lived experience
VI.   Conclusion
   · Applying lessons learned from space to the Earth-bound workplace
   · Mini-case study: Evaluating office space at the headquarters of a major American airline

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