

Women and White Space: Reflecting on Antarctic “Wilderness” and Joining the Transdisciplinary Dots

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“Women and White Space: Reflecting on Antarctic ‘Wilderness’ and Joining the Transdisciplinary Dots” was designed to contribute to current debates in the biophysical and social sciences on the state of today’s climate. The goal of this proposal is to provide a space for reflective, constructive dialogue among the team members and to turn our data into publications. Objective #1 is to use the writing workshop time to analyze the data as a team and write a peer-reviewed journal article targeted to the journal *Environment and Planning D: Society and Space*. Objective #2 is to write an accessible article on how transdisciplinary research has the potential to address environmental challenges for publication in a magazine such as *The Conversation*.

This project aims to explore two fields of study: i) human responses to the environment, and ii) human responses to transdisciplinary work. Prompted by the opportunity to travel to Antarctica as part of the largest all-female-scientist expedition in history, our project team designed a research study using a novel approach called “group auto-ethnography” to document the Antarctic experience through diverse lenses. Auto-ethnography is the analysis of personal experience to connect to the wider social, cultural, scientific, and political understandings. We collected group self-reflections to increase the sample size of the experience, thereby broadening our scope to dimensions that might otherwise be missed when only capturing a single perspective. Recruitment of participants and data collection occurred during and prior to an expedition to the Antarctic Peninsula in December 2016. The expedition was organized to develop leadership skills for a group of women scientists from around the world. Data collection occurred over email in the months leading up to the expedition, and in person on the ship and at landing sites on the Antarctic Peninsula. Expedition participants self-nominated to be involved in the research.

Objective #1 focuses on empirically collected data to ask how exposure to “white space” or connections with nature influence recognition of the richer elements (e.g., sound, smell etc.) of nature, and how nature is a cultural challenge. It is well established that connections with nature support enhanced well-being (e.g., Kaplan and Kaplan 1989). Many studies have explored how visual exposure to nature contributes to these enhanced states of well-being (e.g., Ulrich 1984) and the visual contribution to amenity. More recently, amenity beyond the visual has been recognized as important in contributing to human well-being, culture, and ecology (Corney et al 2015). The extent to which people recognize the elements of nature beyond the visual, and if a more contextual and richer appreciation of nature (in this case, “white space”), could contribute to positive changes in states of well-being and awareness.

To achieve our objectives, we approached data collection in two complementary ways. Participants are members of a project group within the [Homeward Bound](#) 2016 expedition cohort. Participants were provided with hard copy field booklets with a series of questions to which they were asked to provide written or drawn responses over the course of the expedition. Participants were asked to document sensory responses to the physical space during Antarctic landings, and their current feeling in that place. Questions in the printed booklet prompted participants to record the sensory impact of the landscapes, waterscapes, and icescapes on their experiences. They were also asked to document sensory responses to the physical space during Antarctic landings, and their feelings in that place. Participants were instructed to record their answers in the booklet at different points throughout the trip. Booklets were scanned and uploaded to a shared folder on a secure server. One of the research team also approached each team member on a landing and asked them these same questions in situ. These responses were audio-recorded and transcribed.

Objective #2 analyzes the process of designing a transdisciplinary project for an accessible research monograph on lessons learned in transdisciplinary projects. The project is predicated on the premise that climate impacts people and people impact climate. However, knowledge exchange between social scientists who study people and natural scientists who study climate has not been well documented. We collected data on scientists working at the intersection of the natural and social sciences to identify barriers to collaboration between scientists and to deliver actionable plans for successful transdisciplinary research. The project specifically focuses on women, in order to empower female climate scientists in leadership for a more inclusive future. First, we collected hand-written notes taken in meetings. These meetings included debates on the definition of transdisciplinarity as well as different case studies of transdisciplinary projects we previously pursued. A richness emerged as team members presented their perspectives and sometimes changed their way of thinking as they were persuaded by other members. We also tracked connections between scientists from a range of disciplines, how this changed over time on the expedition, and how this aligned with participants' expectations of likely linkages. As a data source, we added questions to the self-reflection booklet provided under #1 that explored expectations around potential connections and collaborations amongst the wider expedition group, existing connections with people from various disciplines represented amongst the group, and potential collaborative connections with other expeditioners. These, along with publicly acquired data on participant biographies, allows for the development of a social network analysis to demonstrate change over time as collaborations develop.

We deliberately titled this project "Women in White Space" to refer to not only the fact that we were women occupying a space dominated by the color white (e.g., ice, snow, icebergs), but also in reference to the fact that women occupy a "white space," or the negative space in the margins of science. This underlying subtext is revealed in the data and adds a novel element to the project.