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ARCTIC DESIGN THEORY: METHODOLOGICAL ISSUES AND INTERESTS' CONCORDANCE PROBLEMS

Thematic Context

The wide-scale problem of scientific, technological, and – eventually – human development of the Arctic runs into the need for a tangible “shell” for newcomers (workers, researchers, etc.) from the middle and low latitudes. In any unfamiliar severe environment, where everyday existence directly depends on adequate equipment (clothing, housing, transportation), special attention should be given to the qualitative characteristics of things and technologies, such as functionality, environmental friendliness, and the ability to facilitate a user's psychophysiological comfort [1]. For design professionals, this means that the Arctic cannot be considered as a “case study” for design practice; this is an independent phenomenon. Therefore, there are no reasons for employing existing design principles, methods, and approaches, which have been developed and tested in moderate climatic conditions.

This paper promotes Arctic Design as a general theoretical framework for design/development actions in the extreme environment, with a focus on human adaptation, safety, and wellbeing. In the world, where any environment is under the probability of becoming extreme over the next 20-50 years [2], the very concept of the Arctic goes beyond its geographic boundaries. From the Arctic as a world's periphery, we move towards the Arctic as a natural lab for observing the anthropogenic climate change, accelerating resource extraction, mass tourism, and other manifestations of Arctic modernities [3]. This lab provides for a testing ground for new life-support solutions and in further perspective for a radical reconsideration of the existing technology-augmented way of living.

However, at its current state, on both national and international scale, Arctic Design exists in the form of heterogeneous (mainly educational) initiatives [4–6] and often understood to onlookers as a set of methods and approaches to the “acclimatization” of existing products and services. Considering the relevance and existing demand for Arctic Design expertise, there is a need to develop a comprehensive theory by structuring and analyzing the practical and methodological experience to date.

Research Questions

Based on the above, three groups of questions are formulated to facilitate further progress in the development of Arctic Design theory and practice, as follows:

- 1) Intra-professional communication (within the professional community of designers):
 - How can we “wrap up” the existing scattered methods and approaches to designing for the extreme environment of the Arctic/North into an inclusive methodology? How can these methods be extrapolated to other extreme contexts?
- 2) Interdisciplinary cooperation:
 - How can designerly ways of knowing complement traditional scientific inquiry and contribute to finding solutions to global problems?
- 3) Also, in the context of large-scale development of the northern territories, accompanied by an influx of non-indigenous population and distantly developed technologies, the following practical questions arise:
 - How to stimulate the emergence and adoption of locally relevant technologies to improve the lives of people in remote, sparsely populated areas with harsh climatic conditions?
 - How to encourage the self-organization and cooperation of users in the form of user innovation communities? How to develop and support collaboration within and between these communities?

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