

The aim of my thesis is to explore changes in material culture under the impact of environmental and climate change, by analyzing functional aspects of Scandinavian Stone Age projectile point technology. My thesis explores environmental impact on human populations during the Middle and Late Mesolithic, in particular around the 8.2 cal BP cold event, through projectile functionality. However, in order to use projectile functionality as a parameter in relation to environmental data, it has been necessary to address problems of representativity. How can projectile point shape variation and development in the circum-Baltic Sea be analyzed to address both functional and non-functional aspects of these objects? How do functional properties, derived from studies of artifact form, relate to the object's actual, original functional role(s)? These issues have been the primary objectives of my thesis so far, are addressed in the first two papers of the thesis and will be the focus of my presentation. The first paper is a geometric morphometric approach to the study of Mesolithic and undated harpoon points from the circum-Baltic Sea area. In the second paper, a theoretical approach is applied to discuss the role of functional properties in two similar activities, hunting and combat. The presentation will also include future work: experimental archaeology, continuum mechanical simulation studies and an integration of artifact geometric morphometrics, zooarchaeology and environmental proxy data.