The present PhD Thesis has two basic aims. First aim is an introduction of many-t'aceted philosophy of Alt'red North Whitehead in a new way. The key to this introduction is an analysis of Whitehead's Category of Ultimate as creativity t'unctioning within two limits, multiplicity and singularity. The second aim is an application of Whitehead's philosophical scheme to aesthetic theory. The Thesis is therefore divided in two parts. First, philosophical, part contains three chapters. Each of them endeavours to characterize certain Ieve! of Whitchead's philosophical oeuvre. The first chapter concerns with Whitehead's detinition of speculative philosophy and tries to point out the role ot' multiplicity and singularity. The second chapter pursues the analysis ot' actual occasion in its process of concrescence. The third chapter deals with Whitehead's conception of society. The second aesthetical part contains two chapters. The tirst chapter of the second part introduces Donald W. Sherburne's development of Whiteheadian aesthetics, based on Whitehead's conception of proposition. It draws attention to Sherburne's static understanding of natural beauty, and tries to develop more dynamic interpretation. The second chapter of the second part shows the environmental aesthetics of Allen Carlson, who argues that aesthetic experience of natural beauty is not static. It is shown that Carlson 's arguments are not convincing and that Carlson illegitimately subordinates aesthetic experience of natural beauty to information of natural sciences. It is noticed that Whiteheadian aesthetics developed here present viable alternative of environmental aesthetics without its subordination to natural sciences.