

# Jefferson

Journal of Science and Culture

AESTHETIC & BEAUTY

Issue 5  
2019



Jefferson Scholars Foundation

# Jefferson Journal of Science and Culture: *Aesthetics and Beauty*

The scholarly publication from Jefferson Scholars Foundation

Issue 5, 2019

Interdisciplinarity is key to a well-rounded scholar. The exchange of ideas, tools and methodologies across fields facilitates a scholar's growth beyond the bounds of their singular area of expertise, allowing room for creativity and inspiration to flourish. As a result, the Jefferson Journal of Science and Culture was founded on the belief that the cross-pollination of various disciplines is a crucial factor for innovation, creativity, and the advancement of scholarship. To facilitate such an exchange, this annual journal is dedicated to publishing articles from a multitude of domains that employ interdisciplinary approaches or teams, all concentrated around a central topic of interest for each issue. In this way, the particular topic may be viewed in a fresh light, promoting new perspectives and the broadening of one's intellect. "The real voyage of discovery consists not in seeking new lands but in seeing with new eyes." – Marcel Proust

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## **The Aesthetics of Interpersonal Attunement in Spiritual Care - Pgs. 1 - 11**

**Michael Nilon**

This article explores how storytelling plays an integral role in interpersonal attunement, attachment, and spiritual caregiving. An interpersonal style of attuning to the experiences of others constitutes an ethical aesthetic of resonant harmonizing between the bodies, nervous systems, and minds of caregivers and patients. Neurobiological research has provided empirical scaffolding to rationally understand how attuned relations regulate the nervous systems of the relating persons. Compassionate caregiving in clinical chaplaincy practices relies on the cultivation of self-regulation capacities through meditation practices on the part of caregivers. Compassionate caregivers then use their emotional equilibrium and empathic insights to open an interpersonal space for receiving the stories of patients, families, and other caregivers in clinical settings. Self-regulation and self-transcendence depend on the empathic understanding between persons and social groups that counteract the harms endemic to many late modern social institutions in which systemic violence often takes place. This article concludes that attuned spiritual caregiving is an appropriate social response to complex trauma and social suffering in the late modern context.

## **A Classical Framework for Assessing Beauty in the Fields of Science and Engineering - Pgs. 12 - 20**

**Raymond Santucci Jr.**

Beauty is that property of an object which clearly communicates itself to the object's perceiver, who is so pleased by what he perceives so as to inspire a movement of his will toward that object's beauty. Beauty is true and it is good, and it greatly enriches all aspects of human life. The sciences are no exception, as they too can be enriched by beauty. As science is concerned with the pursuit of truth for the good of all, it is only natural that beauty be a part of its patrimony. As such, beauty and science are assessed together in this article to find places of mutual enrichment and benefit. An internally consistent framework is presented herein which defines what beauty is and how to critically assess it. This framework is classical in origin and is re-presented here to a modern audience. Once properly understood, this framework can be used to objectively discuss and analyze beauty, particularly within the context of scientific and engineering disciplines. Examples are given to demonstrate how beauty can be better implemented into the sciences with respect to figures, presentations, and products. The ultimate goal of the work is to encourage the critical discussion of beauty and to empower scientists to more beautifully present their research.

## **Musical Aesthetics of the Natural World: Two Modern Compositional Approaches - Pgs. 21 - 32**

**Eli Stine & Christopher Luna-Mega**

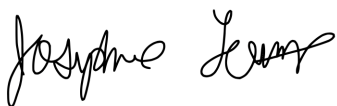
Throughout recorded human history, experiences and observations of the natural world have inspired the arts. Within the sonic arts, evocations of nature permeate a wide variety of acoustic and electronic composition strategies. These strategies artistically investigate diverse attributes of nature: tranquility, turbulence, abundance, scarcity, complexity, and purity, to name but a few. Within the 20th century, new technologies to understand these attributes, including media recording and scientific analysis, were developed. These technologies allow music composition strategies to go beyond mere evocation and to allow for the construction of musical works that engage explicit models of nature (what has been called 'biologically inspired music'). This paper explores two such deployments of these 'natural sound models' within music and music generation systems created by the authors: an electroacoustic composition using data derived from multi-channel recordings of forest insects (Luna-Mega) and an electronic music generation system that extracts musical events from the different layers of natural soundscapes, in particular oyster reef soundscapes (Stine). Together these works engage a diverse array of extra-musical disciplines: environmental science, acoustic ecology, entomology, and computer science. The works are contextualized with a brief history of natural sound models from pre-antiquity to the present in addition to reflections on the uses of technology within these projects and the potential experiences of audiences listening to these works.

# Editors' Note

Dear Readers,

Scholars have unique understandings of the nuance, complexity, and beauty within their disciplines. All disciplines engage with understandings and perceptions of beauty, although they may vary in their objectivity, subject matter, or level of abstraction. What is beautiful, how to define beauty, and what is the role of aesthetics in understanding are all fundamental questions that cross disciplines and cultures. For the arts, humanities and social sciences, beauty may lie in physical works of art, cultural preferences, historical trends, or philosophical understanding; in mathematics and engineering, beauty may be present in data, equations, or architecture; for the natural sciences, beauty may be hiding in the physical world and its myriad properties. It is the goal of this issue of the Jefferson Journal of Science and Culture to present a series of scholarly articles exemplifying the variety of perceptions of beauty and aesthetics present in scholarship today. Articles were selected based on their contribution to their respective fields, interdisciplinary impact, and ability to relate all presented information to a broader audience.

Sincerely,



Josephine Lamp - Editor-in-Chief



Robert Moulder - Editor-in-Chief



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