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Contemporary Arts Practice and Outer Space: A Multi-Disciplinary Approach (3)

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ANCIENT LIGHT: REMATERIALISING THE ASTRONOMICAL IMAGE

**Abstract**

In this time of ecological catastrophe, it is important to readdress our tangible, material connection with the universe and our planet. By analysing this interaction between astronomy, new materialism, and photography, new insights are provided on how this convergence of theories alters our understanding of the natural world. The thesis demonstrates the interconnectedness between the universe, humans and photographic materiality. It discusses the importance of investigating the materials that we use daily, with a specific focus on waste produced by the photographic industry.

Analogue astronomical photography uniquely allows us to understand the intimate connection between the cosmos and the earthbound. Silver is found in distant stars, yet it can be mined from the depths of our Earth and used to create photographic images. Calcium is also found within stars such as our Sun, yet it is also a building block of bones and teeth, which can then be processed to make gelatin. In this text, I draw upon my own reflective practice; I have taken long exposure photographs of the stars in international dark sky locations and observatories. The methodology of this practice-based research is informed by Donna Haraway and Melody Jue, who advocate for an embodied experience of landscape.

The direct material, indexical link in photography is discussed in the context of astronomical photography. I go on to consider more-than-representational, non-human photography, as introduced by Najdowski and Zylinska. My thesis is situated in the context of new materialism, which seeks to understand the intrinsic material connections between human and non-human phenomena. I draw on theorists such as Bennett, Barad, Haraway and Morton, as well as from Kimmerer, who analyses the complex network of material exchanges from a perspective informed both by science and indigenous thinking.

Understanding more about the interconnected nature of photographic and astronomical materiality, it becomes imperative to innovate new methods of sustainable photographic practice. This research demonstrates analogue photographic processes which are less damaging to the environment, including plant-based developers and silver reclamation from photographic fixer. Distinct from contemporary astronomical photographic images, which are often digital composites with interpreted colour, Ancient Light demonstrates our intimate connection with the cosmos, by examining the tangible, entangled connections between the stars, human existence, and the ecology of planet Earth. The thesis advances knowledge in this area by weaving these connections together, providing new insights into the materiality of photography through theoretical lenses of varying magnitude, from subatomic to cosmic.