

Magnitude

Erik Friis Reitan

As artists, we transform ideas and raw materials into cultural artefacts and in a sense, mirror the processes of creation and destruction that takes place on a grand scale in the universe. In the artistic research project *Magnitude* I make this relationship literal by deconstructing astrophotographic negatives through repeated copying. I will discuss how such a seemingly technical investigation and disruption of ordinary process mechanics of photographic technology can yield artworks that engage with the boundaries of existence.

The idea for the project came from my teenage memories of watching movies on video cassettes that had been copied numerous times, to the point that the image was blurry, the colours were almost desaturated and the sound was wobbly. 80s blockbusters like *Raiders of the Lost Ark*, and *Back to the Future*, movies that deal with the ultimate boundaries of time and reality, took on an extra layer of mystique through this effect. Not only was this an aesthetic phenomenon, but it also provided each copy with a unique identity and objecthood.

Unlike a digital copy, which is a one-to-one numerical relationship, the analog copy reads the original, and then tries to replicate it by mimicking its physical expression, rather than gaining access to the precise measurements that brought the original into being. In the reproduction process irregularities and noise are amplified, and the copy takes the place of the original, becoming its own thing. Each generational copy becomes a placeholder for the one before it — both preserving and erasing it — turning the photographic surface into a site where memory, disappearance, and material transformation intersect.

In *Magnitude*, I build on this simple principle in order to initiate a similar process of decay and transformation using black and white film. The starting point is astrophotographic negatives of star fields and nebulae that I photograph on fast 35mm film in the international starlight reserve of La Palma, Spain. The original negative is copied using a slide duplicator, and the resulting copy is then copied again in a repeated process, with a potentially endless number of generations.

Analog film consists of silver molecules that form image noise in the shape of grain structures, due to the silver physically coagulating and building structures on the film emulsion. As the negatives are repeatedly copied, this background noise becomes multiplied and amplified, and blends with the astronomical objects carried over from the original negative. At a certain point, it is difficult to make out what is

what as the original subject matter starts to deteriorate and the details of the image, the stars and galaxies, are extinguished.

Entropy is a measure of disorder in a system, and in the universe this disorder is always increasing. This implies a general drift toward disorganisation, and this one-way process is what gives time its direction. As entropy rises, matter becomes diffused, and moves toward the theoretical end state known as the "heat death," a condition of extreme equilibrium in which usable energy has been exhausted and matter has thinned into a diffuse sea of low-energy particles. Near this limit, time itself, for all practical purposes, ceases to hold meaning, because nothing can happen anymore - there is no change, no longer any difference between past and future.

Entropy was a central topic for the sculptor and land artist Robert Smithson. Smithson questioned the role of the artist as creator - someone who takes raw materials and builds more complex structures. His land art works were designed to do the opposite, to participate in entropic change by being exposed to the erosion of the landscape — a gesture that parallels my own process of placing the photographic image into a state of controlled decay.

In natural sciences, the term *basic (or fundamental) research* is used to describe research into fundamental principles and the building blocks of reality, such as particle physics, cosmology or cellular biology. This type of research explores how the world works at its most fundamental level, without a specific practical outcome in mind.

I see my work in *Magnitude* not only as a sort of "artistic fundamental research" into a universal phenomenon such as entropy, but also as fundamental research into photographic imaging and what role it plays in the artistic process itself: What happens when entropy is used as a frame of reference for an artistic process rooted in and deconstructing conventional photographic technology? How does this affect the artistic choices I make when producing work that an audience eventually encounters, and at what point does the copying process end? How can the project contribute to expanding the repertoire and understanding of photography as an artistic expression?

Joanna Zylińska has argued in her book *Nonhuman Photography* that photography can be seen as a natural process that existed before humans put it into systems using our technologies. She uses examples of imprints such as sunburns and fossils to illustrate this point. Can my project, which involves breaking down the sharpness and image likeness, the pristine quality of lens-based photographic images by escalating their entropy, bring the photograph closer to its "natural" states? Or

does such a process carry the potential to lead photography into a completely new realm?



Ai generated sketch of possible artistic outcome of the project

In previous works, I have used immersive installations to contextualise artistic material resulting from this type of repetitive technical process investigations. In particular, the use of total darkness in combination with tactile works has been effective in proposing alternative ways of engaging with photographic material. An idea for this project is to convert the results into tactile surfaces where the blend of stars and noise in the image can be read through touch, as a sort of “braille” (writing for the blind). This mirrors how the duplication process shifts the gaze from the depths of the universe to the material surface of the film stock. These surfaces can then form individual objects or become part of the surfaces of an overall installation architecture. Installation thus provides me with artistic tools to bring the philosophical and cosmological framework of the project into the viewing experience.

I will also go deeper into research findings from previous projects regarding how such technical process investigations can yield artworks that are relevant on a spiritual and existential level for the viewer.

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artistic research, installation, entropy, analogue photography, copy

