SZABÓ Dezső
**A fény határai / Limits of Light**
5 September – 22 September 2017

The series entitled *Limits of Light* analyses and further elaborates on the problematic that has, in previous years, been presented in the works *Black and White* (Vintage Gallery 2015) and *Exposed* (Vintage Gallery 2016). In terms of genre or media, these types of images are created with the technique known as cameraless photography. From a standpoint of theory and content, the aim is to show the basic medial properties of the photograph. At the same time, in close connection to this aspect, these works can also be regarded as reflections on questions of image theory.

As its central point of enquiry, the *Limits of Light* series explores how two basic elements of photographic images can be rendered explicit – or, in other words, visible – without any other, secondary information. These two elements are light and a photosensitive surface. In this case, the photo paper serves as the medium on which information is recorded, while light functions as the conveyor of that information. The interaction of these two things results in what we call a photographic image (or imprint), which, in effect, is the visual rendition of a given phenomenon in accordance with a certain set of parameters.

To be specific, these images carry the marks of events that have been created using pyrotechnical means. In essence, what the photo paper captures are patterns of an intense burning process, accompanied by an emission of light and heat – a well-known, everyday phenomenon. The photo paper records the release of energy on the same spectrum as what human eyes can perceive. Aside from light, the second factor is time. As the occurrence of the event (exposition time) lasts from a few seconds to a few tens of seconds, processes that can be measured in seconds are condensed into a single image or sign. (We should not forget: the "picture" we create of the world always presents itself according to the factors on which we have based our enquiry.) If, in this present case, we disregard time, then we are left with the other key factor: light. But what is light?

Frederick William Herschel, in 1800, conducted an experiment to determine whether various colours were emitting the same amount of heat. Upon analysing the colour spectrum, he found that temperature increased as he moved beyond the visible red region. This, in practice, meant that he discovered infrared radiation. In 1801, Johann Wilhelm Ritter, inspired by Herschel's results, conducted his own colour experiments using paper coated in silver chloride. He noticed that the paper turned increasingly black toward the purple end of the spectrum and continued to do so even after leaving the visible range of colours. The thus discovered deoxidizing ray was later named ultraviolet radiation. These findings, among others, ultimately lead to the conclusion that visible light constitutes only a fraction of what we today refer to as electromagnetic radiation. Ritter's experiment marked the first occasion when photographic raw materials were placed in the service of scientific research. Later, numerous further scientific discoveries were made, in which the tools of photography played a vital role. In 1895, Wilhelm Conrad Röntgen, in a serendipitous outcome of his experiments with a cathode ray tube – which also utilized a photo plate – discovered X-rays. And of course there is also the uncannily similar story of Antoine Henri Becquerel's discovery in 1896, which served as the first evidence of radioactivity.

My reason for mentioning these particular examples from the history of science is that the individual pieces of the series show similarities to the visual products gained from the physical experiments of the late 19$^{th}$ and early 20$^{th}$ centuries. This is the result not only of the specific area of research, but also of the tools that were employed in these endeavours. The *Limits of Light* series, of course, makes no attempt to answer any scientific questions; it thematizes an art problem, which, despite its analytic (reductive) nature, comes to completion through sensory perception.

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