The Sixth International Conference on Transdisciplinary Imaging at the Intersections between Art, Science and Culture

Dark Eden

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A shadow zone, a spectral landscape, a cemetery, zombieland.
The debris of an old image culture, or compost for a new one?

The cultural moment now dubbed "Contemporary" is defined by the networked saturation of images. By the diffusion, dissemination and inundation of frictionless image production. By image hacking, image consumption and image commerce on social media and in platform capitalism. By 24/7 crisis news, doom-scrolling and misinformation spread by web influencers. By CCTV and drone surveillance. By massive multiplayer online gaming. By "deepfake" hoaxes and simulations that augment reality and contribute to the relentlessly cynical campaigning of our 21st century political twitter "newspeak". Is not this cornucopia and unprecedented availability of mediated imagery a kind of Eden? If so, it is a dark Eden. Metaphorically fertile as a forest that is so thick with its tentacular edicts that the light that penetrates cannot escape its web; or perhaps, and more likely, that its mutated growth is now dependent on a black rather than bright light. Its darkness might be that of the pall of ash-filled smoke shrouding a burning continent.

Conference papers addressed the general topic from any angle (direct or oblique), but were asked to consider at least one of the following areas:

- Expanded image
- Remediated image
- Hypermediacy
- Expanded film
- Imaging science
- Computer vision
- Networked image
- Immersion
- Speculative realism
- The invisible, the subliminal, the inaudible or subaudial
- Infraworld
- Enlightenment and the post-truth era
- Augmented reality
- Artificial intelligence, or intelligent systems

Image courtesy of Paul Thomas

Phosphene Expressionism

Michael Garbutt and Nico Roenpagel

Abstract

Phosphenes are the light shows that appear beneath the eyelids when we close our eyes. In this paper we report on Phosphene Expressionism, an activity that formed part of a participatory performance event held at the Osh Regional Museum of Fine Arts in southern Kyrgyzstan in September 2020. Through the phosphene experiences of the particpants, we examine the role of play in art reception and production and the way in which this distinction disappears – we become the involuntary producers and percipients of a physiological-aesthetic phenomenon that illuminates the darkness.

If you shut your eyes, you will probably see a fuzzy colour field, perhaps sprinkled with sparks, spots, lines, zigzags or flashes, all pulsing, fragmenting and morphing into other forms and colours. This eyes-closed light show is a phosphene (from the Greek *phos*, meaning 'light' and *phanein* to 'show' or 'appear'). (1) The phenomenon is experienced by everyone except those born blind, but may even be induced in the latter through transcranial magnetic stimulation. (2) In contrast to 'after images', which appear briefly with eyes closed when the retina is saturated with light, (3) phosphenes persist even in completely dark environments and can be intensified by applying gentle pressure to the eyeballs, through muscle tension or massage. (4) They are the product of an entoptic or endogenous stimulus that releases bio-photons, i.e., particles of light that have been absorbed by cells in the eye or brain and then released following a stimulus (5). Different types of cell release photons of different wavelengths, hence the variations in colour and form. (6) The optic nerve relays the stimulus to the visual cortex, which then interprets the percept as either a phosphene or (pathologically) as an element in the external world. (7)

Unsurprisingly, these self-generated auroras have been linked to various historical art and ritual practices. Bednarik et al. claim that the resemblance between phosphenes and the abstract motifs found in Palaeolithic rock art is not coincidental, arguing that the motifs record phosphenes experienced in altered states of consciousness associated with shamanic practices. (8) Kellogg et al. propose that the similar geometric primitives found in phosphenes and the drawings of children from the age of three suggest that both the under-the-eyelids phenomenon and the drawing impulse are activated by the same pre-formed neuronal networks. (9)

But whatever their role in the phylo- and ontogenetic origins of art, the 'stunning magnificence' of phosphenes has been a recurrent subject for visual artists since the mid-20th century, spurred in the 1960s by experimentation with hallucinogens (10). As Michael Betancourt observes in an essay on the glitch in video art, phosphenes are essentially a glitch in the human visual system, and hence share a natural affinity with video, a medium that is well-suited to represent their temporal, shifting quality (11).

In this paper, we explore the constitutive role of phosphenes in a participatory performance practice—*Phosphene Expressionism*—developed as part of the Playful Eye Project. (12) Emerging from our earlier work on the Mindful Eye, which examined contemplative practices in art and design, (13) the Playful Eye was launched in 2018 to promote art museum visitors' encounters with artworks through contemplative, somatic

and embodied experimental practices informed by the concept of play. Employing either facilitator-led or self-directed web app modes of delivery, we have curated events for visitors and educators at institutions in Australia, the United States and Europe, including the National Gallery of Australia; QAGOMA, the Queensland Art Gallery and Gallery of Modern Art, Brisbane; the Olbricht Foundation's Collectors' Room in Berlin; and the Smithsonian Institution's National Museum of Asian Art in Washington DC.

Play is also the informing principle of the museum-based art education model developed by Elliott Kai-Kee and colleagues at the J. Paul Getty Museum in Los Angeles. (14) Recognising that embodied experience is an inherent but previously overlooked aspect of art appreciation, Kai-Kee et al. propose that an artwork be understood as an affordance, enabling activities which can be either executed or imagined through the medium of play. (15) No longer trivialised as mere 'fun' or the exclusive province of children, play is valorised for people of all ages as a mode of learning through exploration and enquiry without the mediation of language. (16) Citing philosopher Hans-Georg Gadamer, Kai-Kee et al. note that the back-and-forth movement which the word 'play' also denotes, describes the dialogical relationship between the viewer and the work which constitutes aesthetic experience in the art museum. (17) As the *Phosphene Expressionism* practice described here illustrates, the roles of artist, viewer, and work—and hence the locus and nature of aesthetic experience—can be fluid.

After the closure of art museums as a consequence of the Covid-19 pandemic, Playful Eye events in 2020 were held online. These included five events delivered in collaboration with art museums in Kyrgyzstan. This series is the subject of an ongoing research project to explore the phenomenology of aesthetic experience (18). Four of the events were presented entirely online, in collaboration with Altynai Kudaibergenova, Senior Research Fellow at the Gapar Aitiev Kyrgyz National Museum of Fine Arts in Bishkek. In contrast, the fifth event was held in situ with participants in physical attendance at the Regional Museum of Fine Arts in the southern city of Osh. Delivered over two hours on the afternoon of 17th September 2020 in collaboration with deputy director Baktygul Midinova and curator Anatoly Tsybukh, the event included the *Phosphene Expressionism* practice which is the focus of this paper.

Figure 1: *Altyn Kapalova (centre foreground) leading participants in The Playful Eye in Osh. Osh, Kyrgyzstan, September 2020.* Photo credit: Aida Musulmakulova.

The museum is situated on the western outskirts of the city of Osh, at the foot of Sulaiman-Too Sacred Mountain, a UNESCO World Heritage site. (19) The 'Playful Eye in Osh' was held in a wooded public garden adjacent to the museum. (Fig 1.) The location was chosen to investigate the nature of aesthetic experience beyond the art museum, in the absence of artworks—the garden does not contain any of the museum's collection. In addition to on-site facilitators, a photographer and a videographer, 17 people (6 females, 11 males) attended, all residents of Osh. After receiving face masks and water bottles outside the museum entrance, participants were briefed about the project and reminded of public health physical distancing requirements. They were then directed to enter the garden through a nearby lych gate, where each was given a lightweight portable chair.

The event was facilitated by Altyn Kapalova, a Research Fellow at the University of Central Asia's Cultural Heritage and Humanities Unit. Through a Zoom app on her phone Kapalova was connected to Roenpagel in Berlin and Garbutt in Sydney, who alternated in giving practice instructions in English, which Kapalova translated for participants.

The event consisted of a *Settling In* exercise; an introduction to the structure and purpose of Playful Eye practices; followed by the six practices. In order of presentation, these were: *Looking Through Gaps Between the Fingers* (exploring a fragmented visual field); *Gazing into the Eyes of Another, 1* (in which participants exchange a mutual gaze); *Gazing into the Eyes of Another, 2* (exchanging the gaze with a non-human other, such as a tree or rock); *Becoming an Artwork* (e.g. a performance artist; a situationist in a situation; a human sculpture); *Swimming Through Honey* (exploring a fantasy affordance); and *Phosphene Expressionism.* The instructions for Phosphene Expressionism were as follows:

> *Whether you're in darkest night or brightest day, a spectacular colour animation always appears behind your eyelids. This is because we don't only receive light from outside our eyes. In very small quantities, our eyes also emit light, released by cells inside the retina. You can stimulate the release of more particles of light by gently applying pressure to your eyes. Together with the external light that penetrates from our environment, we experience a phantasmagorical artwork of shifting forms and colours.*
>
> *Close your eyes and attend to what you see for one minute, allowing your thoughts and feelings to drift in and out of awareness. Try to remain focussed on the images beneath your eyelids.*

After 60 seconds …

> *Now open your eyes and share your experience with a partner. Give your partner an art critic's review of the phosphene experience. What shapes and colours did you see? What feelings did they express or evoke? Give your 'artwork' a title. How did it change your experience of the garden? What did you learn about garden or yourself?*

In their account of Gadamer's contribution to a theory of play in the art museum, Kai-Kee et al. note (20)

> Gadamer assigns an important role to the back-and-forth movement of play in the experience of works of art, arguing that aesthetic experience occurs in the exchange between the viewer and the work. Artworks present themselves in and through play with their viewers. This exchange, this "play," is the very being of art. A viewer must, then, "play along." Viewers will only understand works of art if they allow themselves to be lifted into the work's own play. The experience of an art object is one of falling into play that overcomes us and, at the same time, pulls us in."

The back-and-forth movement of play describes a dialogical relationship between an artwork and the viewer, in which both contribute to realising the work's affordances. In the case of the phosphene practice, this relationship is internalised, since the practice dissolves conventional distinctions between artwork, artist and viewer. The artist and viewer are one and the same, while the phosphene—a spontaneously occurring physiological epiphenomenon, often passing below the level of conscious awareness— is re-framed as an artwork. To the extent that phosphenes can be produced by applying pressure to the eyes, the participants had a modicum of control over the experience, but the principal intervention is in the act of framing the experience as art. The conceptual prompt was given by the event curators, along with an interpretive cue ('expressionism') in the practice name. It then belonged to the participants, however they chose to engage with it. Elsewhere, we discuss the implications of this reframing of experience as a constitutive element of an everyday aesthetics. (18) Here, we consider it from the perspective of an aesthetics of play at the intersection between image and self.

The phosphene practice involves several distinct types of imaging. Initially, with eyes open, participants experienced a visual field made up of the garden and its environs, including the bodies of other participants and parts of their own bodies. Consciously or otherwise, the participants could relate these received images to their store of personal memories, perhaps of the same location on other occasions or of other locations, in each case with the affective charges attached to these associations. With eyes closed, the associations remained potentially accessible to participants, along with their acoustic, olfactory, interoceptive, and proprioceptive experiences of the garden. In contrast, the visual field became a memory image, differing from the original to the extent that memory is selective, fallible and mutable.

The salience of these memories, their affective associations and the sensory presence of the garden depended on the extent to which participants attended to them. For those whose attention was fully engaged with the phosphenes, their presence may have been minimal. But the afternoon sunshine continued to penetrate the participants' eyelids so that a sensation of the dappled light may have been perceptible, mixed with the phosphene display and any afterimages that persisted on the retina. The 'play of light' therefore involved a dynamic flow from outside the body-mind to within, and vice versa. The flow across inner and outer worlds recalls the definition of play proposed by psychologist and psychoanalyst Donald Winnicott (21)

> … the third part of the life of a human being, a part that we cannot ignore, […] an intermediate area of experiencing, to which inner reality and external life both contribute. It is an area which is not challenged, because no claim is made on its behalf except that it shall exist as a resting-place for the individual engaged in the perpetual human task of keeping inner and outer reality separate yet inter-related.

This experience of imaginative play as a third space linking inner and outer realities was understood by Winnicott as precursor in childhood, and in later life, the prerequisite of all creative practices. By inviting participants to frame their visual experience as an artwork spontaneously produced by their own body-minds in the garden, the activity constituted just such a 'resting-place' for creative engagement at the intersection of garden, body-mind, and imagination.

After 60 seconds, participants were invited to open their eyes and share their phosphene encounter with a partner, reflecting on its quality as an aesthetic experience and the extent to which it may have revealed aspects of the garden or the experiencing self. In their role of critic and self-analyst, the participants were now distanced from experiences that cannot be reproduced or accurately represented, and whose meaning and value are entirely subjective. The invitation bracketed the experience from the undifferentiated flow of the lifeworld by framing the sensations, thoughts and feelings— positive, negative or neutral—associated with this third space of play as part of an aesthetic encounter. It also offered an opportunity for self-reflection and potential discovery, further blurring the boundaries between self and other; image production and reception; public space and intimate personal space.

Phosphene Expressionism demonstrates that there is no darkness so dark that it is devoid of light. Malevich's *Black Square* is to darkness what the concept of a line is to its representation–-an idealised abstraction without a material correlate. We are beings of light, image makers whether we want to be or not, and, no less involuntarily, interpreters of the meaning and value of these images. At the heart of darkness, outer and inner realities connect in creative play.

Notes

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Nico Roenpagel PhD was awarded his doctorate by the University of New South Wales Sydney's Faculty of Art and Design for a study of contemplative approaches to art museum education. He is the co-founder of WEVOLVE, a Berlin-based provider of next-generation leadership development programs for organisations that include eBay, SoundCloud and the German Ministry of Defence.