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*Negative Capability: Imaging and Imagining Fundamental Science through  
“Productive Doubt”*

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The idea of “Negative Capability” was first proposed by the English poet John Keats in a letter to his brothers in 1817; here, writing against the historical backdrop of the Enlightenment, Keats had the revelation that being in what he called “uncertainties, mysteries, doubts without any irritable reaching after fact and reason...” (Wu 2005: 1351) was not only a highly productive state for creativity but was indeed prerequisite for that creativity to take hold. As an artist and academic, I have co-opted Keats’ phrase for an ongoing, practice-based research project that uses non-documentary photography and film to interrogate extremes of visual and imaginative representation, particularly in relation to ideas of certainty and doubt. In recent years the project has approached these questions through an engagement with fundamental science and technology, involving a number of organizations that are operating at the extremes of imaginative cognition and representation including CERN, The Centre for Advanced Instrumentation (Durham University), and Boulby Underground Laboratory in the U.K. As a project, *Negative Capability* is advocating the ‘production of knowledge through looking’; in this respect, it is premised on visual arts practice as a producer rather than an illustrator of knowledge, placing artistic production in the spaces where experimental and theoretical science is performed and foregrounding the “site” or laboratory as a social, cultural and political space where meaning is shaped and constructed rather than received or observed. (Doubleday 2007)

Most non-scientists experience an imaginative lacuna when confronted with the abstract ideas of scale and complexity associated with fundamental physics, astronomy or mathematics. When, for example, we attempt to approach the philosophical conundrum

of dark matter, or assimilate the possibility of eleven dimensions, there is a kind of vertigo induced that could be thought about in terms of Kant's "Analytic of the Sublime" (1892) where, as James Elkins has observed, "Intuition gives out when magnitude passes a certain point. That moment can cause vertigo as comprehension gives way to apprehension." (2008: 116) Historically, Western culture has measured space and time through the body but we are overwhelmingly denied these coordinates in relation to fundamental science and technology where the twin extremes of macro and micro scale often operate beyond our perceptual and cognitive grasp.

Through the project *Negative Capability*, I am asking if it is possible to approach that which is literally and/or conceptually imperceptible via the seemingly perverse use of visual, photographic means, and, further to this question, could the desire for empirical knowledge be suspended in order to engender a productive state of unknowing that might be termed "Productive Doubt"? These ideas are explored in relation to an earlier body of work (2001-2010) that was exhibited under the title, *Subterranea* (Crisp 2009-2010) and featured images taken in various underground locations where many of the conventional co-ordinates of photography (light, movement, geographic/cultural location) were either absent or suspended; through these works, I talk about my approach to re-ordering the basic structures of photography to construct a form of space that I identify as 'impossible.'

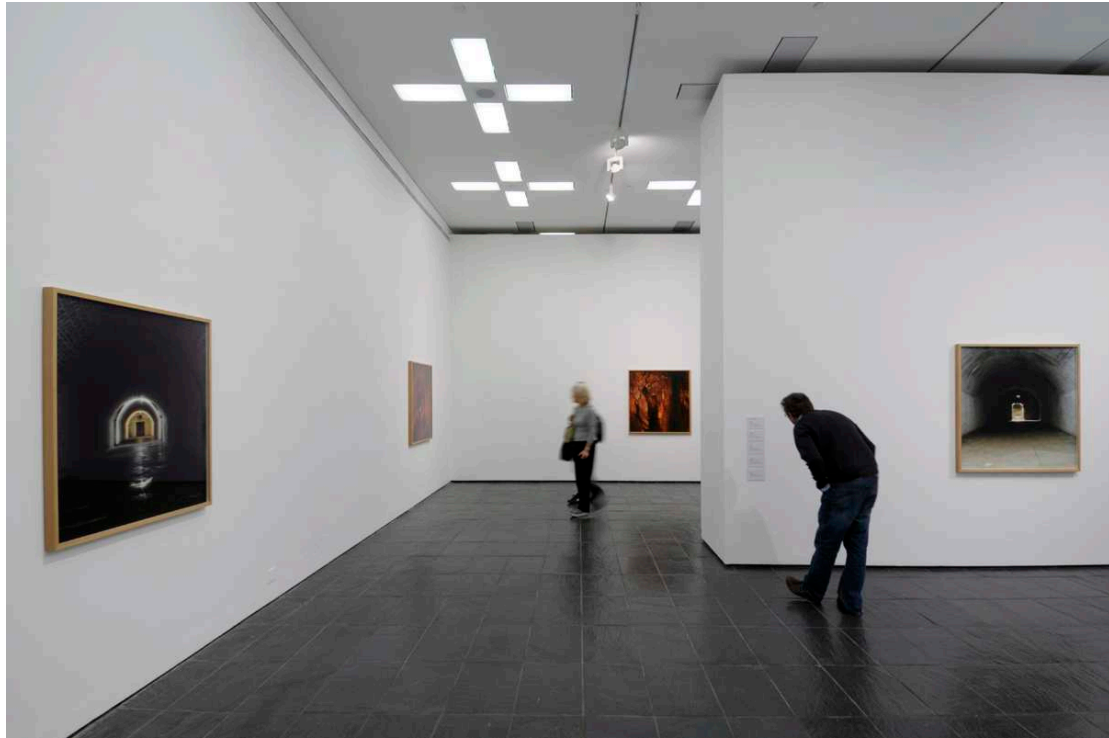


Fig 1. *Subterranea 2009/10*. Installation view. BALTIC Centre for Contemporary Art, Gateshead. U.K. Photograph Colin Davison

My roots as an artist are in sculptural practice; in this respect I consider the language of mass, space and physical presence to be my mother tongue, but I now work mainly with non-documentary photography and film, making large-scale installations where viewers' spatial encounter with the still or moving images are carefully choreographed. The installations often make use of tropes of seating associated with particular forms of public "looking" or reception of information, for instance church or meeting hall benches, gallery furniture, or the ubiquitous park bench. The seating, if successful, 'positions' the viewer in relation to the work in visual and conceptual terms whilst at the same time offering a haptic encounter with material surfaces, eliciting a simultaneous sense of distance and intimacy; much of the work plays with such dichotomies of interior and exterior or public and private space, and the seating's role is central to both splitting and conflating these realms.

The images themselves are described as ‘non-documentary’ because, despite the fact that the photographs are, in literal terms, a document of a specific site, they have no documentary intent. By this I mean that there is no narrative drive, no conveyance of meaning beyond the image’s own, internal presence. Through, or possibly because of, this lineage, I have developed an ongoing interest in the phenomenological ontology of the photographic object. Many of the films and images are made at sites of great phenomenological power but, paradoxically, it is the photograph’s inability to adequately embody presence - its phenomenological failure - that fascinates me. I am drawn to the three-way schism that opens up between what the photograph is, in and of itself; how it stands in relation to the actual time and space it depicts; and how the photographic object behaves in the viewer’s act of encounter. It is within this triangulated relationship (between image, site and encounter) that, for me, the coordinates of architectural space, time or states of being are destabilized or re-ordered, allowing instead for a space to become manifest that we, as viewers, cannot mentally re-inhabit: an *Impossible Space*.



Fig 2. *Catacombe #13* 2001/2. Archival Pigment Print on Cotton Rag from B&W pinhole negative.

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The solo, touring exhibition *Subterranea* (Crisp 2009-2010)<sup>1</sup> brought together a number of distinct series of works that I had evolved over a nine-year period at various man-made underground locations. The sites, ranging from a German military hospital in the Channel Islands to Boulby Underground Laboratory, a Dark Matter facility housed in Britain's deepest working mine (Fig 1.), are all spaces made through a process of excavation in a form of 'reverse' construction; essentially existing as architectures without exterior. Here many of the usual 'markers' of photography (light, time, space, culture, climate, culture) are either distorted or suspended altogether and, collectively, the very

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<sup>1</sup> Archived at: <http://balticplus.uk/?search=fiona+crisp+subterranea> and <http://www.fionacrisp.com/projects.subterranea.html>

particular conditions of these spaces formed a paradigm from within which I could question the ontological capabilities of photography. The earliest works in the exhibition dated from 2001 and were created with pinhole cameras in the Early Christian catacombs of Rome. (Fig 2.) Apart from the anachronistic presence of safety lighting, these catacombs had been in a state of virtual stasis for hundreds of years; here, almost all indicators of geographic or cultural location are withheld and stability of light and climate are absolute. In many ways the resultant photographs represent a tautology, inasmuch as they are still images captured of spaces that are, essentially, already still, already 'dead'. Within the three hours taken to expose the large-format film of the pinhole negative, an indeterminate time is opened up between 'some time' and 'no time' and, similarly, in the suspended identity of place, a space is created between 'some where' and 'no where'; an *Impossible Space*.

Undoubtedly, my thinking as regards imperceptibility has been shaped by my approach to the processes and "rhetorical forms" of photography (Townsend 2009: 66). I continually return to sites that are either liminal or hermetic, aporetic spaces where two contradictory forces coexist; for example, between being and non-being, interior and exterior, seen and unseen, absence and presence. One of these two structural tropes (the liminal or the hermetic) define the visual and philosophical concerns of almost all my photographs and, in so doing, override the actual subject of the image; in this respect it is "how" something is looked at by the camera, rather than "what" is looked at, that is important and it is from this particular positioning that I approach the physical, philosophical and conceptual concerns of other expert cultures.

In 2009, after almost a year of protracted negotiations, I was granted access to Boulby Underground Laboratory on the North Yorkshire Coast of the UK where experimental



astronomers and physicists are involved in a number of projects, including the search for WIMPs (Weakly Interacting Massive Particles). At 1km deep and stretching out 9km under the seabed, Boulby is the deepest operational mine in the U.K. with the laboratory occupying its own, bespoke tunnel. Like the subterranean spaces that I had previously experienced and made work in, the environment at Boulby was phenomenologically compelling, but there were further levels on which these spaces resonated for me. I was drawn to the relationship between the extreme material environment (a basic architecture hewn from rock) and the abstract, immaterial nature of the knowledge the scientists were pursuing; to date no WIMPs have been detected at any of the handful of underground laboratories around the world that are running experiments to prove their existence. Furthermore, no particle will ever be observed directly but will only be evident via its trace. For me, these combined conceptual, philosophical and physical parameters produced an innate, gut-sense of recognition, the origins of which I was unsure: was I identifying the environments and objectives of experimental scientists with some of the perverse aspects of my personal methodologies and interests with regards photography, or, did these parameters reflect photography on a more ontological level? Or, was the act of bringing together the phenomenological site where the science is performed, with the abstruse ideas of the science itself, causing the vertigo where comprehension gives way to apprehension?

To move to another key idea of Kant's:

... there is in our Imagination a striving towards infinite progress, and in our Reason a claim for absolute totality, regarded as a real Idea, therefore this very

inadequateness for that Idea in our faculty for estimating the magnitude of things of sense, excites in us the feeling of a supersensible faculty. (Bernard 1914: 109)<sup>2</sup>

Could photography be some kind of conduit to this supersensible faculty? If so, could photography and film contribute to a cultural negotiation of “extreme” science and technology, not through being utilized as a documentary tool, but by being used as a language that mirrors science’s probing of the furthest reaches of imagination and comprehension by way of “opening-up” or “performing” an impossible space? Central to this thinking is the suspension of our desire for empirical knowledge to allow for what I have already referred to as productive doubt: this could be useful in the context of scientists understanding how advances in their field are culturally connected as well as for lay-publics being able to imaginatively engage with those advances. Furthermore, productive doubt could provide artists and other cultural producers with a tool to think through the implications of scientific and technological advances *via practice* and might encourage the evolution of collaborative working relationships that genuinely advance knowledge across the arts, fundamental science and social science simultaneously. In this respect I believe that there are conceptual and philosophical parallels in art practice that can, potentially, help us to imaginatively engage with technological and scientific advances, particularly with regard to ideas of certainty, doubt and the limits of the imagination.

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<sup>2</sup> I am extremely grateful to James Elkins for bringing to my attention the relevance of Kant to the concerns of this project.



Fig 3. *Negative Capability (Extraordinary Renditions)* 2013. BALTIC Centre for Contemporary Art, Gateshead. UK © Fiona Crisp

It is important to note that my work is not concerned with imparting subject-specific knowledge: just as I avoid any claim to a documentary subject, I also eschew the notion that my visual practice in any way ‘demonstrates’ ideas within science and technology. Often the co-option of art by science for public outreach or research impact purposes (sometimes actively promoted by organizations and funding bodies) is highly problematic, especially where “science is understood as complete, and as needing only to be communicated or applied, while art provides the means through which the public can be assembled and mobilized on behalf of science.” (Born and Barry 2010: 103) The exhibition and symposium, *Extraordinary Renditions: The Cultural Negotiation of Science* (Crisp et al. 2013) produced at BALTIC Centre for Contemporary Art for the British Science Festival attempted to actively critique this model by framing visual practice, not as an

“illustrator” or “interpreter” of science but as an active contributor to emergent technologies that are, necessarily, heterogeneous; that is to say, constituted from a hybrid mix of the technological, the socio-political and the cultural.<sup>3</sup>

The various works made for *Extraordinary Renditions* were both speculative and experimental, but, crucially, they fore-grounded practice as a producer of knowledge. My installation *Negative Capability (Extraordinary Renditions)* 2013 (Fig 3.), combined photography, film, sound and seating to create an immersive environment where the triangulated relationship of image, site and encounter referred to above, could be explored. Included was *Boulby* 2013 (Fig 4.), a film shot from a truck journeying through subterranean tunnels several miles out underneath the sea bed of Boulby Mine. The relentless noise of the confined engine accompanies the vehicle as it moves into the constantly enveloping darkness toward the excavation face of the mine. Hung on the opposite wall, in contrast, was the mute stillness of *The Ballroom* 2013, a large archival pigment print of an image taken in an eighteenth century lead mine in the North of England. The space, as the title suggests, is known locally as “The Ballroom” and is reached by three hours of walking, stooping and crawling through underground tunnels until a large cavernous space where vast amounts of lead have been excavated opens up. It was here that the image was made by exposing color transparency film to an environment where there was, of course, no light. (Fig 5.)

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<sup>3</sup> Archived at: <http://balticplus.uk/?search=Extraordinary+Renditions>



Fig 4. *Boulby* 2013. Film Still. Single channel digital video

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Given the parameters of my approach to photography already outlined (the suspension of conventional markers, the construction of impossible space, phenomenological failure) *The Ballroom* acts as seminal work within my practice. Although representing no apparent image, it is a photograph that faithfully records the conditions of the place it was taken in terms of space, light, climate and geography. As an artwork it may appear to be conceptual in intent, but I don't consider it to be so: the photographic information is embedded in the analogue transparency that subsequently became the digital file and is now a large, framed pigment print that one can sit on a bench and experience. Crucially, *The Ballroom* is a physical object that we, as viewers, encounter in a bodily fashion; it is hung low, it engulfs us with a depth it is hard to find the surface of and, in an act of

optics, it sucks the light from around it. With this work we are, therefore, turned away from the idea of photograph as ‘image’ and are instead forced into a relationship with its ‘affecting presence’ that works on our bodily, spatial senses as much as on our intellectual, interpretive faculties.



Fig 5. *The Ballroom* 2013. Archival Pigment Print on Cotton Rag from Colour Transparency

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The relationship between the phenomenological experience of the mine and its subsequent transformation, its mutation, its sublimation into a photographic art object that we now experience in another space and time, is at the core of my thinking about imperceptibility. It is within this context that I began thinking about Keats’ idea of Negative Capability, where certainty is suspended and doubt is embraced as a creative force. Negative Capability is an idea that could also be thought about in relation to Derrida’s use of *aporia* (of doubt used as a rhetorical device) but I am also using a literal

reading of the phrase: what is a photograph and what is it actually capable of? These ontological questions are a thread running throughout the work and, in this respect, the idea of doubt but also the presence of the impossible (or more accurately the manifestation of a type of impossible space) are all, for me, potential conduits to the imperceptible.

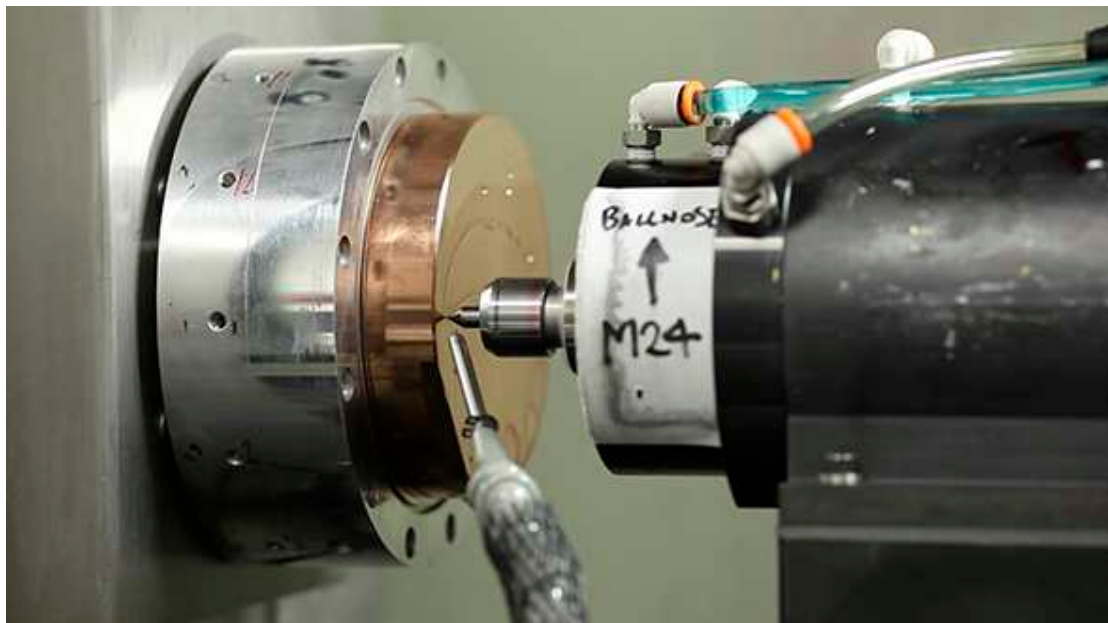


Fig 6. *Precision Optics: Centre for Advanced Instrumentation* 2013. Film Still. Single channel digital video.

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The last few years has seen me bringing together my long-term interest in the phenomenological ontology of the photographic image with thinking about the roles that imagination, visualization and, crucially, doubt might play in the cultural assimilation of fundamental science and technology. The many open-ended questions raised in this article are testament to the fact that this project is still in its early stages but, essentially, I am asking scientists to trust me to be in their environment, to give me access to ideas, spaces and equipment, and to take a risk with me in what is a speculative process that

posits the role of film and photography as non-documentary and non-interpretive whilst (probably most controversially) proposing the production of knowledge through *looking*.

Potentially, we are on the cusp of paradigmatic change in the fields of theoretical and experimental areas of particle physics and astronomy yet, as noted above, the ability of lay publics to assimilate or “negotiate” these shifts are limited by our visual, haptic and cognitive experience. It is from this counter-intuitive position, using film and photography in an attempt to approach visual and haptic experience of the imperceptible, that I propose the idea of productive doubt, building on the remarkable prescience of Keats’ idea of Negative Capability, expressed almost two hundred years ago.

### **Acknowledgements**

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