

Lord Asriel, Experimental Theologian : Man, Maker, Media and the Challenges of Seeing the New

journal or publication title	Notre Dame Seishin University kiyo. Studies in foreign languages and literature, Studies in culture Notre Dame Seishin University kiyo. Studies in Japanese language and literature
volume	38
number	1
page range	10-23
year	2014
URL	http://id.nii.ac.jp/1560/00000125/

Lord Asriel, Experimental Theologian: Man, Maker, Media and the Challenges of Seeing the New

Kate BOWES[※]

アズリエル卿 実験的神学者

— 人、創造主、メディア、新しいものを見るという挑戦 —

ケイト・ボウズ

フィリップ・プルマンの三部作『ライラの冒険』には「実験的神学者」が登場する。実験的神学とは作者プルマンが作り出した虚構の分野で、これは究極の現実的実存である神について知られていることは真実で信用できると断言できるのか、そうであれば、どのようにして断言できるのか、という重要な質問に焦点が絞られているように思える。この質問を検討するために、作家は生存の核にある神秘を理解するための二つの異なる方法を取り入れている。すなわち、科学（実験）と宗教（神学）である。純粹なる現実・実存の識別は我々には不可能なため、我々にできる精一杯のことは現実のように思えるものを解釈することであるが、これは修練を伴い、想像力を駆使することが要求される。本稿においては、『黄金の羅針盤』のアズリエル卿のカメラ、卿が撮影し、手を加えて披露する写真等を通してアズリエル卿の人物像を明らかにし、さらに、見ることに専心し、多くの光学的器具が発明されたヴィクトリア朝にも言及する。加えて、これまで見たことがなかったものを見るということはどういうことか、知られているものをどのように伝えるのかという、アズリエル卿の写真が掲げる中心的問題から、実験的神学者が現実を境界付けるために使用する質問方法を考察していく。

キーワード：実験的神学、カメラ、見ること

This essay is the first of a proposed series looking at the so-called Experimental Theologians who appear in Philip Pullman's *His Dark Materials* trilogy. It will explore the methods they use to interrogate the boundaries of reality in and beyond which God is. Experimental theology, a fictional discipline created by the author, seems to revolve around the central question: are the things claimed to be known about God true or reliable, and if so, how? In asking such a question the author puts into the ring

Key Words: experimental theology, camera, seeing

※ 本学文学部英語英文学科

two different, but ultimately complementary, modes of apprehending the mystery at the core of life. Out of the engagement between science (experimental) and religion (theology), certain boundaries are challenged and made permeable, new questions about epistemology are raised, and novel territories are traversed in the quest of drawing closer to the truth. Since we are unable to recognize pure reality, the best we can do is interpret what presents as real. This entails the discipline and exercise of imagination for there is a slipperiness at the borderline between visible and invisible. Pullman makes no attempt to hide or apologize for the narrative's allegiances to science nor its animosity toward 'religion,' a popish and power-hungry (fictional) institution active with very bad sorts of people, anathema to the ideal instituted by Jesus' early followers. However, in the richness of his storytelling, Pullman's devotion to Art, that which ultimately unites all human endeavour, is beyond doubt. The essay will examine some of the problems and possibilities involved in seeing, in particular where seeing is used metonymically for knowing.

Lord Asriel, the principle subject of this essay, uses the seeing device of the camera to gather evidence of some very unusual perceptual experiments which promise to stretch what can be known of reality. The images he produces, called 'photograms', highlight the problem of not being able to see what is (somehow) present. In this he resembles the early observers of the dark sky, astronomers like Copernicus, Brahe and Galileo who defied the prevailing 'common' sense (i.e. the Ptolemaic or Aristotelean models of the cosmos) and achieved, by their interpretations of their visual evidence, the upending of what had previously been understood as the human's place in the universe. There are three important and interdependent elements which inform my analysis: the mediating object, the camera which stands between the agent and the object; the images themselves, media which reveal re-presentations of events and experiences; and lastly, the maker or processor and primary interpreter of images, Lord Asriel. Lord Asriel's camera functions in similar ways to breakthrough instruments like Herschel's telescope which had a twofold effect. For one, it 'allowed the galaxy to be penetrated with far greater precision than ever before, with the inevitable result of increasing the individual observer's sense of their own insignificance.' Second, 'observation of the natural world had to yield place to the importance of the imagination, increasingly recognized as having a central role within scientific inquiry' (Flint, 62). Kathleen Lundeen notes that such optical advances 'altered dramatically the stubbornly held view of the universe as an enclosed dome with stationary stars and revealed it to be unbounded space with stars in flux' (5). New views of the universe had immeasurable cultural impact and forced theologians to reconsider conventional views of God and humankind.

At the start of the first book of Pullman's trilogy, *The Golden Compass*, the reader meets Lord Asriel, a dashing adventurer-explorer-scientist drawn from a type

familiar to the Victorian age of imperial expansion. He is to show slides from his latest expedition to the fellows of his college. Ostensibly, his research presentation is aimed, or so the Master of Jordan, his Oxford college, believes, in extracting more money to continue his potentially inflammatory ('heretical') research project in the Arctic north. There seems to be some reluctance to granting Lord Asriel these funds as the Master has reason to believe that pursuit of Lord Asriel's research will lead to 'appalling consequences' which will also involve the child, Lyra, the novel's heroine. The longer he can forestall Asriel's return to the north, the longer he can keep Lyra safe (29). From just this brief summary, it is possible to pick up echoes of the Biblical creation story's proscription against the eating of the forbidden fruit to guard against (overwhelming?) knowledge not (yet?) fit for humankind.

Prior to the gathering of the scholars who are to later vote on Asriel's funding, Lord Asriel had entered the Retiring Room, believing himself to be alone. On the verge of taking a sip of poisoned wine, he is stopped from doing so by Lyra leaping out of her hiding place in the wardrobe, to warn him against drinking it. In order then to keep up appearances and rather than drinking the wine, he engineers a situation in which an accident occurs for which he blames one of the serving men. This is Asriel's first act of deception. Lyra is given a severe scolding and physically threatened by Lord Asriel who decides that for her punishment she must return to the wardrobe and spy on the Master, who, in addition to being reluctant to release funding for Asriel's explorations, is also the person who had poisoned the wine meant for Asriel. A complicated set of relationships is established even before Asriel's explosive slides are shown.

Asriel is portrayed as a rebellious, charismatic, persuasive, single-minded maverick. He, like Lyra, has entered the Retiring Room, breaking the rules to be there. 'Guests,' we are informed, 'entered the Retiring Room at the Master's invitation only, and Lord Asriel knew that.' Lord Asriel knows, too, that 'There's probably some ancient etiquette that allows them to fine me . . . for coming in here dressed improperly' (11). By entering this room, he has transgressed the first of many boundaries that threaten to contain his vast, hubristic ambitions: to kill the Authority and destroy the Church across all worlds. He is significantly described as a man who 'seemed a wild animal held in a cage too small for it' (13). This sense is accentuated by a number of containing devices: the room itself (which he has breached); the wardrobe (in which he has hidden a spy); and convention itself (which he has shamelessly flouted). Each seems to serve as a space in which he ratchets up and flaunts his domineering personal power.

The Master extends to Asriel a polite welcome and reminds the audience that Asriel's sought after expertise in this 'time of high political tension' is required by the government in London. Before Asriel commences his slide show he, like a chess-master, moves the characters into place around the room. He moves the elderly sub-rector nearer the screen so that the Master will be seated closer to Lyra's eavesdropping post in the wardrobe. Even before one image is projected, the setting is thick with hidden

layers. The Master maintains the dignity of his office, but the reader knows that he has failed to poison Asriel and is resistant to giving Asriel any further funding. The reader also knows that Asriel knows that the Master has tried to poison him but is pretending not to. Lyra finds herself between a rock and a hard place. She has seen her chief protector, the Master, attempt to poison her 'uncle' Asriel. Then, having rescued Asriel from his fate she is punished by being commissioned as a spy 'to keep . . . from getting further into trouble' (15). The hidden layers are accentuated symbolically in the setting by the emphasis given to the elements of light and dark, presenting a multivalent challenge of how to discover what is reality and what is only appearance/performance.

It seems more accurate to characterize Lord Asriel's presentation to the scholars as a performance than a mere showing. It is, for one thing, supremely calculated. He moves spectators into places of his convenience all the while looking as if his priority are their needs, to ensure his (hidden) mastery of the room. Supporting this claim regarding performance is the technology Asriel uses for his slide show, a lantern which projects 'a brilliant white circle' (19) where the similarities to the stage spotlight are clear. Before the 'photogram' slide show commences, the lights go down and the room is darkened. This alternation of light and darkness prepares the reader for suspense: what is to be revealed and what is to be hidden?

A screen and a projecting lantern are set up in the room and further hints are given that, though this is unusual, as it is 'urgent and important' (13) Asriel's improprieties (being in possession of neither formal dress nor invitation from the Master of the college) are likely to be overlooked. The author creates an easy-to-understand neologism for the slides, renamed 'photograms', to highlight the slight otherworldliness in which the action of the narrative is taking place, the differences between the fictional world and its technologies and our own. There are to be four slides shown from Lord Asriel's latest expedition to the North, slides which, along with their presenter, have added tension in the college, to an already simmering atmosphere thick with rumours that: 'the Tartars have invaded Muscovy, and were surging north to St. Petersburg from where they would be able to dominate the Baltic Sea and eventually overcome the entire west of Europe' (10). Government intrigue, threats of invasion and war add to the background tension informing the scene. Lord Asriel says to his snow leopard daemon: 'This is a bad time, Stelmaria' (11).

Asriel begins the presentation with a confession of deception: 'I set out for the North twelve months ago on a diplomatic mission to the King of Lapland. At least, that's what I pretended to be doing' (19). He goes on to describe his true intention as being 'to go further north . . . to try and discover what had happened to the Grumman expedition' both to the research project Grumman was undertaking and to Grumman himself who seems to have mysteriously vanished. The first picture, however, he announces 'isn't directly about either of those things' (20). There seems to be a recurring delay in Asriel's ability to speak without obfuscation.

The first 'circular photogram' shown was in 'sharp black and white' and 'had been taken at night under a full moon.' The circular photogram echoes the shape and light emitted by the Moon, and reveals a snow covered wooden hut beside which stand 'aerials, wires, [and] porcelain insulators', instruments Lyra recognises as 'philosophical instruments.' There are two human-like figures in the picture: one a man whose face is 'hardly visible' and beside him 'a smaller figure.' So far, so normal. Lord Asriel explains that the photogram had been 'taken with a standard silver nitrate emulsion' and then shows them a picture of the same scene using a new specially prepared emulsion' (20).

When the next slide is put into the frame it appears much darker. The larger elements from the scene remain visible along the horizon but the 'complexity of the instruments was hidden in the darkness' (20). The first shock to the audience is delivered when they see that the image using the new emulsion has produced an image with hugely different visual effects. Now, the man 'was bathed in light and a fountain of glowing particles seemed to be streaming from his upraised hand' (20). Appearing as light, these are, in fact, particles of the mysterious substance known as Dust, which 'registered as light on the plate because particles of Dust affect this emulsion as photons affect silver nitrate emulsion' (21).

The image in the third slide was taken on a moonless night with the standard emulsion. In the bleak Arctic foreground lay typical explorers' paraphernalia: tents, wooden boxes, and a sledge. In this photogram, however, rather than any human figures, the main interest is in the sky. 'Streams and veils of light hung like curtains, looped and festooned on invisible hooks hundreds of miles high or blowing sideways in the stream of some unimaginable wind.' Lord Asriel tells the assembled Scholars that the phenomenon known as the Aurora or Northern Lights occurs when 'storms of charged particles and solar rays of intense and extraordinary strength-invisible in themselves [cause] this luminous radiation when they interact with the atmosphere.' The urgency attending the presentation has meant that Asriel has not been able to have the slide 'tinted to show . . . the colours . . . pale green and rose . . . with a tinge of crimson' (22).

The fourth and final photogram showed the same scene, though darker. What is revealed in the image taken with the special emulsion is likewise, something entirely unexpected: 'There in the sky was the unmistakable outline of a city: towers, domes, walls . . . Buildings and streets, suspended in the air!' (23). Where the response of the chaplain to the depiction of Dust as light is described as relief, 'like a thirsty man who, having just drunk deeply, puts down the glass to let out the breath he has held while drinking' (21); the sight of the city in the sky raises more mixed reactions. There is both contempt and skepticism but also excitement 'as if, having written treatises on the existence of the unicorn without ever having seen one, they'd been presented with a living example newly captured.' The majority of the experimental theology scholars' 'heads were craning forward, their spectacles glinting' (23). Soon, in a later private

conversation following Asriel's departure, the reader learns that the last photogram in particular has provoked fear because it picks up on research done by a pair of researchers called Barnard and Stokes, 'two renegade theologians who postulated the existence of numerous other worlds like this one, neither heaven nor hell, but material and sinful. [The worlds] are there, close by, but invisible and unreachable' (30). This research was found by 'the Holy Church' (a crude shadowy double) to be heretical and Barnard and Stokes were silenced. The Master is audibly concerned that the college will be implicated by Asriel's research and thought to be 'a hotbed of support for heresy' (31).

Asriel's emulsions reveal the extraordinary. The images they have captured are beyond normal perception, and certainly they are beyond the expectations of the scholars for whom Lord Asriel's explanation of what they were seeing 'caused a sudden collective silence, followed by gasps of incredulity' (21). To the chaplain who had asked whether the light streaming from the upraised hand of the man in the picture was going up or down, Lord Asriel had answered that it was coming down but that it was not what they thought they saw, that is, light; rather it was the mysterious substance called 'Dust'. (What is it about Dust and why is the sight of this more shocking than seeing light coming down and alighting on an adult man as we do, for example, in much of the late twentieth-century biblical artwork of Jesus where light surrounds him?) The response to the second picture is more guarded and scholarly. Having seen one shocking image, the spectators may have been better prepared for more of a similar nature. Instead of assuming they know what they see, one scholar asks, "What is that?" The experimental emulsion comparison slide, arguably more shocking in its revelation, shows what appears to be a parallel world just beyond the Aurora. One scholar risks suggesting 'That looks like . . . a city', a remark which is followed by a more highly ranked scholar who sneers, 'A city in another world, no doubt?' One fellow, the Palmerian Professor, wonders if the image could be connected with 'the Barnard-Stokes business', which Asriel affirms, declaring he is trying to find out more about this line of research.

Lyra, in the wardrobe, has an inverse set of responses to the special emulsion slides. Hearing about 'Dust' for the first time, she, like the reader, has her curiosity piqued. 'Something in the way he said it made Lyra imagine *dust* with a capital letter, as if this wasn't ordinary dust' (21). Seeing the second comparison slide, however, she 'pressed her face to the crack to see more clearly . . . As she gazed, her wonder grew . . . She nearly gasped with wonder' (23). Putting these responses side by side: the scholars' shock followed by a more measured, mixed and cautiously excited attitude and Lyra's initial perplexity being replaced by awe and wonder reflects an important difference between the minds of children and those of adults. What disturbs the order of the adult world is often rejected or defended against or perhaps it is (gradually) adopted with trepidation, whereas the new to the curious and brave child is welcomed

with awe and a generous but indiscriminate hospitality.

We are given to understand that Lord Asriel is powerful, ambitious and manipulative and the setting of the 'photogramic' show has given due cause to raise our sensitivity to the duality of what is hidden (in the dark and possibly underneath his emulsions) and what is revealed (in the dark via the projector and screen). The photographs we have been shown communicate very clearly that there is more than meets the eye under or beyond the surface media we are able to see. The claim stands, too, when applied to character: it is hard not to feel that beneath Asriel's declared agenda, something more is being concealed. One emulsion shows one thing, relatively easy to see; another shows a generally darker and less detailed view but highlights sights beyond the natural spectrum of visibility. The charged particles of the aurora are invisible but in causing luminosity they act similarly to Asriel's emulsion bringing out details of the previously unseen.

Writing that is rich in imagery is an attribute common to both children's literature and fantasy writing. Images, whether textual or visual, leaven stories, lend immediacy and enable access to meaning, at various depths, to readers across a range of ages. Images can be seen outwardly in the act of observation, but they can also be seen in quite a different and separate process, inwardly, with the eyes of imagination and memory. The image functions like a door to the imagination.

The idea of the image as portal in turn suggests one that initiates a transformation psychologically, or, more physically, one that generates movement. Lord Asriel's images function in the latter manner mainly, causing movement, but it could equally be argued that they initiate the quests of Lord Asriel and Lyra. For Asriel, the images act in a centrifugal way, plot-wise. At first, they draw him to Jordan college where he is situated as an experimental theologian, a profession akin to that of a physicist or cosmologist. (The science part of his identity is eminently clear; the theological not nearly as much, if at all; a pointed absence.) Later, the images propel Lord Asriel back to the north convinced that there is more of the mystery to be mastered, 'appalling consequences' be damned! For Lyra, the images, seen first through a crack in the wardrobe doors, cast an awesome impression by which her imagination is totally seduced. They ignite in her a strong desire to travel northward, a conviction which grows in strength and spurs her on her journey there. Their separate missions in the North—Asriel's, a destructive one and Lyra's, a redemptive one—come together at the climax of *The Golden Compass* when they are again reunited. Lyra does manage to survive the catastrophe that Lord Asriel causes, but the doom the Master had predicted does indeed come to pass.

Philip Pullman's interest in imagery is evident in *His Dark Materials* on two scales. On the very small scale is the alethiometer gadget, the eponymous 'golden compass,' a truth-telling device whose guidance is divined via combinations of images;

and, on the larger scale, there are the photograms that Lord Asriel shows as evidence of his northern research discoveries. The central question raised by Lord Asriel's photograms is: what is it to see something that has never before been seen? That the camera can render visible that which the human eye cannot see makes pervious the boundary between the visible and the invisible and thereby challenges the known. The resulting uncertainty indeed wobbles one's orientation in the world. John Berger writes in *Ways of Seeing* that 'It is seeing which establishes our place in the surrounding world . . . The relation of what we see and what we know is never settled. Each evening we see the sun set. We know that the earth is turning away from it. Yet the knowledge, the explanation, never quite fits the sight.' (7-8)

Following, I examine the connection between seeing and understanding by means of the mediating device of the camera with its layers of lenses and mirrors which, in addition to the lens of the human eye, collaborate to contact or lay claim to another, now absent, reality. Photographers 'take' in each exposure, a tiny element of another world, the image world. This seeing and representation of other worlds was a particular preoccupation of the Victorian era, as I will discuss, and the many gadgets to aid the visual sense that were refined and invented then have had radical impacts on human orientation in the wider universe. My discussion will also touch on a genre of writing that was popularized in the nineteenth century, that of the 'modern fantastic,' a mode that has energizing connections to the scientific developments of the period. A speculative and promethean mood informed the scientific and literary worlds of the day. Experiment was the name of the game; (religious) belief *passé*. This attitude resonates strongly in Pullman's trilogy in the field of experimental theology and explains the disproportionate emphasis on the experimental over the theological which is identified almost entirely in an explicitly negative light. There is a permeable presence/absence dialectic--a kind of virtuality--that lies at the heart of fiction, photography and faith, all to a degree mediated cultural products, and I suggest that it is this dynamic relationship in art and storytelling that most inspires imaginative engagement with these forms of creativity.

What are we looking at when we view photographs of stars, solar and lunar eclipses, meteor showers, auroral displays, comets in near space and novae and nebulae and even galaxies in 'outer' space? The interaction between the product of the camera, (material) images, and the human is complex, and arguably even more so with the medium of the photographic than with other kinds of handmade imagery.

Saint Paul appears to have been prescient when he wrote in a letter of the connection between sight and knowledge, 'For now we see through a glass darkly, but then face to face: now I know in part, but then shall I know . . .' (1.Cor.13). While Paul's words bear recognizable Platonic influence suggesting that the world cannot be fully known by embodied, time-bound intelligence, it also offers a starting point for an

examination of the power of the glasses (including lenses and mirrors, for example) we have developed over time which now are capable of seeing deep (and mysteriously) into space and time. Indeed, modern science has a way of challenging the patient line of St. Paul's thinking (see, for example, the 'now . . . then' pattern) with its exponentially rapid discoveries and inventions. Lord Asriel's camera clearly estimates the 'seeing through a glass' (or lens) but, rather than in 'darkly' or difficult to understand terms, Lord Asriel believes he has gone ahead and, by dint of his own efforts, achieved breakthrough revelations based on the finely-tuned emulsions he has developed. (In fact his work is based on the predictions made by the scientists who preceded him.) He appears to have conjured what had been hidden into the light of discovery.

Lord Asriel's accomplishment underlines a pithy remark made by the cosmologist, Lisa Randall, who, early in her 2011 talk to the British Royal Society of Art declared: 'You need resolution to see.' It seemed, on first hearing, a humorous and skillful play on words suggesting on the one hand purposefulness or perseverance (as Lord Asriel's character surely demonstrates), and on the other, the ability to perceive objects at different scales in the universe (as his experiments actually disclose). Seeing into what is hidden from the naked and untrained eye cannot be accomplished without skill, patience, practice and tools (neither in matters of science nor faith). New instruments, though, have taken human vision to places the eyes themselves could never reach and have thereby extended the boundaries of our reality. In this, correlatively, they might be recognized as having expanded and illuminated various areas of theological possibility, too. Malin writes, 'The dramatic transformation of photography from a recorder of the visible to a detector of the unseen, opened a window onto a universe that was much bigger and more mysterious than anyone had imagined' (n.p). Tools have enabled us to see and understand the world in more profound and nuanced ways outside the scale and limit our physical bodies present. They have extended the boundaries of our reality and transformed our ideas, identities and futures.

In her book *Knocking on Heaven's Door*, Randall highlights the fact that 'Scientists could decipher what matter is made of only when tools were developed that let them look inside.' Lord Asriel's special emulsion has allowed him to look, in a sense, beyond the ordinary. In astronomical terms, however, as Randall clarifies, the word "look" is somewhat misleading, for it 'refers not to direct observations but to the indirect techniques that people use to probe the tiny sizes inaccessible to the naked eye' (94). Lord Asriel's special emulsions are one of those probing but 'indirect techniques' which give, potentially, just a hint of hesitation about whether to believe or, at least, how to conceive of knowing this new thing? Others include such technological manipulations as lengthened exposure and the practice of combining or 'stacking' images, a process whereby multiple exposures produce an image with a higher signal-to-noise ratio than

found in any of the individual exposures used for the 'stack' (Malin n.p). An argument could be made that Asriel's imbricated photograms employ a kind of stacking in that they appear to de-emphasise certain layers of scenery while others come to prominence. This recalls the ancient literary device of the palimpsest though the dynamic of hiding and disclosure is complicated and uncertain in the photograms. One might also think of the layering of paint in art as working in similar ways to conceal and reveal. By far the most interesting of the 'indirect techniques' is the one that is used by the human agent looking into the dark and distant skies via telescope called the 'standard dim viewing practice' which requires, after a number of physical preparations (relaxing, deep breathing to oxygenate the brain, keeping both eyes open, covering the left with a hand and checking the map for the location of the desired object before concentrating the right eye on the telescopic eyepiece) looking with 'averted vision'. Looking a bit away from the target object is necessary, astronomer Timothy Ferris explains, because 'the eye is more sensitive to dim light just off-centre than straight ahead' (31). Trial and error has shown that the less we look at celestial objects directly, the better the chance of seeing them. Saint Paul's notion of seeing 'through a glass darkly' when coupled with the technique of 'averted vision' points to an intriguing intuition about perceiving the very depths of reality.

Photography and photographic images are a frequent motif in Pullman's writing, particularly in those stories which have an historical, specifically, Victorian feel to them such as his earlier *Sally Lockhart* series (1985-1994) set in 1872, where one of the central locations is a photographic studio. The camera was one of the seeing instruments that came to prominence in the nineteenth century, along with the 'magic lantern, the kaleidoscope, the stereoscope, the pseudo scope, [and] the zoetrope' (Flint 5). In *The Victorians and the Visual Imagination*, Kate Flint describes the Victorians as 'fascinated with the act of seeing, with the question of reliability--or otherwise--of the human eye, and with the problems of interpreting what they saw' (1). Flint argues that optical instruments, together with the marvels of visual scale produced by the telescope and the . . . microscope, served to challenge, at the level of popular perception, the quality of observations made by the unaided human eye' (5). It is a challenge that occurs in *The Golden Compass* and reflects a current difficulty in late modern civilization: that of trusting images in an age of digital enhancement. Lord Asriel's photograms remind the reader and his scholarly viewers of this uncertainty. How can these sights, that have been reproduced in slide form, re-present the real? The images he shows cannot be explained by the known laws of either the fictional world, nor in the (real?) world that exists for the reader. Are they illusions or skillfully produced deceptions designed to inveigle funding from the college? If the images have been doctored and are false, the laws of the world remain what they are. If, conversely, they are true representations of the outlandish phenomena guessed at by Grumman, Barnard and Stokes, they herald a

disruption, for then reality is not as we had believed and laws exist which are presently unknown. Unknown, perhaps, in the sense that the predictions and calculations of the missing and silenced researchers had received no further attention until Lord Asriel's advance on their theories, but the evidence presented did not come completely out of the blue. Proof might reasonably have been expected. Still, the actual evidence did, however, threaten to introduce complications into the college's relations with the Oblation Board and its overseeing organization, the Magisterium. The shock of the observations, translated and reproduced into (material) images, combined with the anticipated difficulties involving other more powerful institutions of authority, has two effects. First, the images introduce an air of uncertainty and a sense of suspense and hesitation in the space between knowing and not-knowing which troubles the ability to discern and integrate the new information and its implications. Second, the hesitation engendered by the apparently divergent relations between science (represented by Lord Asriel), and religion (represented by the Magisterium¹), might be recognized as the basis of true fantasy. 'True fantasy,' wrote Dostoyevsky, 'must not break the hesitation experienced by the reader in interpreting events. Tales which are too incredible to be introduced as 'real' break this convention . . . The fantastic . . . must be so close to the real that you almost have to believe it' (qtd in Jackson, 27).

Rosemary Jackson provides a strong link between the nineteenth century fascination with the visual and the emergence of the modern fantasy genre when she traces the etymology of the word 'fantastic' from the Greek through to the Latin *phantasticus* meaning 'to make visible or manifest' (13). Making something visible is a problematic process, as Lord Asriel's images demonstrate. The photograms challenge the reader to entertain the possibility that all that we can and do see is not all there is to reality. It challenges the well-worn aphorism that declares 'seeing is believing' -for though the fellows see, they are reluctant to believe, because what Lord Asriel has brought to visibility has been interpreted as something heretical or theologically subversive. Seeing may well be an element of believing, but knowing is something of quite a different order. Readers may well wonder if, in fact, believing is seeing? Do we, in fact, see and integrate only what we believe we know or expect to see and remain blind to all else? To see or recognize something is not to know the thing itself, but as Asriel's slides intimate, the images disrupt old certainties and beckon to the curious, the imaginatively courageous and the (doctrinally) unencumbered, namely, to the heroine, Lyra.

Photographic images are regularly used as evidence of the real and belief follows almost naturally due to the dominance of the visual sense and the link in our

¹ This conflict, often overplayed in the media, shows some purchase in the non-fictional world as can be seen in Professor Richard Dawkins' polemics, for example, in his 2006 book, *The God Delusion*.

epistemological and metaphysical systems that makes 'I see' synonymous with 'I understand. 'However, if the image outlasts what it represents: what kind of reality can the image be said to have? The image gives the appearance of something that is actually absent. When we see images, we usually think we are seeing one thing when we are really seeing another. Surrealist artist Rene Magritte's painting '*La trahison des images*' (The Treachery of Images), is a good illustration of the point. It depicts on a plain beige background a painting of a wooden smoker's pipe. Underneath the object is written in plain cursive script in French, *C'est ce pas une pipe* (This is not a pipe). Magritte's work challenges the observer's preconditioned perception of reality by reminding them that an image is a re-presentation of something; not the thing itself. To some extent the image must be considered an illusion; something that exists in the mind rather than in the world. John Berger underscores the point observing that

An image is a sight which has been recreated or reproduced. It is an appearance . . . which has been detached from the place and time in which it first made its appearance and preserved . . . Every image embodies a way of seeing. Even a photograph. For photographs are not, as is often assumed, a mechanical record. Every time we look at a photograph, we are aware, however slightly, of the photographer selecting the sight from an infinity of other possible sights. (9-10)

That the evidence is held on 'slides' indicates a slipperiness about the material, not at all aided by the overwhelming impression of Lord Asriel's duplicity. When he departs from Jordan college, the only proof that remains is what has been impressed on the imaginations and memories of his viewers. Can those intangibles be trusted any more than Lord Asriel? How reliable are these forms of inward seeing? What are the criteria for reliability anyway, especially when the subjectivity of imagination and memory are involved?

Seeing is always influenced by the forces of imagination and memory, but one may distinguish, too, between outward and inward modes of seeing. The mediating materials of the outward mode, exemplified in many fields of science that depend on observation--glasses, mirrors and carefully crafted lenses--are obvious. However, as I have argued, we are fooled when we believe that the mechanical aids a clearer take on reality. Plato proposed that we live in a world of appearances and the dancing shadows we perceive mask a true reality beyond the image of things. Plato thought that everything exists in its pure form in the realm of ideas, but we perceive just a glimmer of this world of forms coming through into the material world around us. To Plato, the visual world, the world of images and appearances, is limited because an image of an object doesn't function as the object itself; it is a referent, pointing us in a direction towards an idea. This great teaching illustrates the wonder as well as the difficulties of encountering the not-yet-known.

To see what is absent or hidden beyond the visual reach, requires the mind's eye. Imagination is the one instrument with the true power to open things up and with

it one learns to see differently, and by extension, to think differently. Kendall Walton offers a challenging aural metaphor to think into the difference between the material (say, the photogram) and the immaterial (the objects photographed). He writes: 'One hears both a bell and the sound it makes, and one hears the one by hearing the other' (252). This recalls something of Plato's division of reality into Ideas and Forms as well as comments made by Philip Pullman in the 2002 Arbutnot Lecture in which he describes one of the basic motivations informing his life and work:

I suppose I could describe it as coming to terms with an absence--the absence of God--because I cannot believe in the God who is described by churches and in holy books. So I'm conscious of God only as an absence, but an absence which is full of echoes, troubling echoes and unhappy ones, consoling ones and kindly ones, chastening ones and wise ones. These echoes fill my mental universe just as the background radiation which apparently fills the cosmos is an echo of the original Big Bang. Echoes in the space where God has been. (qtd in Lenz 10)

The events we have been discussing from the narrative in this essay have no basis in objective reality. They are entirely mediated. We do not 'see' Lord Asriel, the projecting lamp he uses, or the ephemeral images he projects. And yet, despite this (physical) absence there is still a powerful presence projected by the storyteller's words which conjure into being the character of Lord Asriel, his surroundings, beliefs and relationships, all of which leave a lasting impression upon the reader. He is virtually--in all his manliness and strength with all of his force and power, as the Latin etymology of 'virtue' is defined--present. The space between presence and absence is analogous to the distinction between actual and potential existence. Using Aristotle's classic example of virtuality, which saw in the presence of the oak (the actual) the acorn (the potential), Marie-Laure Ryan remarks that, 'In scholastic philosophy "actual" and "virtual" exist in a dialectical relation rather than in one of radical opposition: the virtual is not that which is deprived of existence but that which possesses the potential, or force, of developing into actual existence' (27). Presence and absence likewise exist in dynamic relation, flickering in and out of existence, much like stars. It may be that nothing of worth in reality is simply given, either in fiction or photography or faith and it may be as the film-maker, Federico Fellini proposes: *Nulla si sa, tutto immagina* (Nothing is certain: everything is imagined) but, as long as there is art and storytelling, as long as what is potential is being formed into the actual, we have a boat that can float along the shores of mystery.

WORKS CITED

- Berger, John. *Ways of Seeing*. London: Penguin Books, 1972. Print.
 Ferris, Timothy. *Seeing in the Dark*. New York: Simon & Schuster, 2002. Print.
 Flint, Kate. *The Victorians and the Visual Imagination*. Cambridge: Cambridge

- University Press, 2000. Print.
- Jackson, Rosemary. *Fantasy: The Literature of Subversion*. London: Routledge, 1981.
- King James Version of the Holy Bible*. New York: Random House, 1991. Print.
- Lundeen, Kathleen. "On Herschel's Forty-Foot Telescope, 1789." *BRANCH: Britain, Representation and Nineteenth Century History*. Ed. Dino Franco Felluga. Extension of *Romanticism and Victorianism on the Net*. Web. 23 Sept 2103. 23.9.2013]. Web.
- Lenz, Millicent and Carole Scott (eds.). *His Dark Materials, Illuminated: Critical Essays on Philip Pullman's Trilogy*. Detroit: Wayne State U.P, 2005. Print.
- Magritte, Rene. *The Treachery of Images*. 1928-9? Oil on canvas. Los Angeles County Museum of Art, Los Angeles. Web. 9 August 2013.
- Malin, David and Dennis Di Cicco. "Astrophotography - The Amateur Connection, The Roles of Photography in Professional Astronomy, Challenges and Changes." <http://encyclopedia.jrank.org/articles/pages/1115/Astrophotography.htm>. Web. 9 August 2013.
- Pullman, Philip. *The Golden Compass*. New York: Yearling, 1995. Print.
- Randall, Lisa, lecture. "Scientific Thinking, the Universe, and the Modern World." *Royal Society of the Arts*, London. 18.10.2011. MP3 file.
- _____. *Knocking on Heaven's Door: How Physics and Scientific Thinking Illuminate the Universe and the Modern World*. New York: Harper Collins, 2011. Print.
- Ryan, Marie-Laure. *Narrative as Virtual Reality: Immersion and Interactivity in Literature and Electronic Media*. Maryland: Johns Hopkins University Press, 2001. Print.
- Walton, Kendall L. "Transparent Pictures: On the Nature of Photographic Realism." *Critical Inquiry* 11 (December 1984): 246-277. Print.