If you're reading this then I take it you're a fan of *His Dark Materials*, or maybe you've just discovered Lyra's story via Philip Pullman's new trilogy (*The Book of Dust*) or the new television series. I'm a fan too: I grew up reading and re-reading the *His Dark Materials* trilogy, gripped by the fantastic images conjured up by the descriptions of the worlds that make up Philip Pullman's fictional universe. From Lyra's Oxford with its zeppelins, colleges, and gyptians from the Fens (which is where I grew up!), via the world of the mulefa with its giant birds and elephant-like motorcycle gangs, and finally to the battlefield where the forces of the new Republic of Heaven face-off against Metatron and those fighting on behalf of the Authority. In hindsight, the concepts introduced in Pullman's books have continued to shape the way I think long after I first read them. Not that I ever really *stopped* reading them: I finished the latest addition to the series, *The Secret Commonwealth*, almost before the first reviews came out.

As a fan of *His Dark Materials*, I think it is worth knowing where the roots of these stories and the ideas contained within them might lie. Pullman himself is upfront in acknowledging that his work is indebted to several books from the history of English storytelling. Most fans will know that *His Dark Materials* draws on books like John Milton's *Paradise Lost* and the prose of William Blake, as well as faerie stories dating back to the Middle Ages. But I want to draw the attention of fans to a connection between *His Dark Materials* and another important figure in the history of English storytelling: a seventeenth-century philosophy and fiction writer called Margaret Cavendish. I'm going to make the case that knowing about the philosophy and fiction of Margaret Cavendish enhances our appreciation of *His Dark Materials*.

I think there are two reasons why His Dark Materials fans should be interested in Cavendish. Firstly, she wrote a short story called *The Blazing World* which tells a very similar story to Lyra's journey in Northern Lights. The Blazing World is a story about a woman who travels through the North Pole into another world where she meets talking bears. This should sound familiar to anyone who has read Northern Lights. It's also worth noting that several literary scholars and historians of philosophy think *The Blazing World* is the first example of science-fiction writing in the English language: it was written almost two-hundred years before Mary Shelley's Frankenstein. The second reason fans should be interested in Margaret Cavendish is that she defended a philosophical view called panpsychism. Panpsychism is a philosophical theory that tells us that everything in the world around us, from grains of sand to human beings, is *conscious*. It literally means all or everything ('pan')¹ is soul or mind ('psychic'). As surprising at it may seem, panpsychism is becoming quite a popular view amongst philosophers today who are interested in consciousness and the mind. However, Cavendish held this view over three-hundred years ago when most philosophers were defending a mechanistic account of the universe: one which likens the world around us to clockwork or mechanical instruments. On the mechanistic account of the universe, we are alone in being conscious. For example, one prominent mechanist, Descartes, famously believed that even animals were simply complicated machines or 'automata'.

Why should this be of interest to fans of *His Dark Materials?* Because Philip Pullman is himself a panpsychist and has said so in several interviews. I think we can better understand Pullman's world if we understand panpsychism. In particular, understanding panpsychism helps us understand why Dust is so important in Pullman's fictional universe. Over the course of both trilogies – *His Dark Materials* and *The Book of Dust* – we learn that Dust, a mysterious

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¹ Think Pantalaimon, the name of Lyra's daemon, which means 'all-forgiving' or 'all-compassionate' (of course, we see Pan's forgiving side stretched to its limit in *The Amber Spyglass* when Lyra leaves him behind to enter the world of the dead).

substance which attaches itself to human beings, is at the bottom of everything. And, Dust, we learn, is closely connected to consciousness.

Make no mistake, I'm not saying that Philip Pullman must have read Margaret Cavendish or *The Blazing World*. In fact, he told me (on Twitter) that he had not. But he also told me, when I asked him about Margaret Cavendish, that 'books can influence you even if you don't read them'. I think fans of *His Dark Materials* should know about Margaret Cavendish because *The Blazing World* tells a remarkably similar story three-hundred years before *Northern Lights* was ever written and because Cavendish defended panpsychism long before it was a popular philosophical view. In my view, the connection between Cavendish's writing and Pullmans' stories provides an added dimension to the connection between *His Dark Materials* and the history of English storytelling.

New Worlds

Both Philip Pullman and Margaret Cavendish explore the fascinating idea that our world is connected to other worlds at its poles. This idea is perhaps inspired by the fact that, for a long time, maps seemed to depict one world connected at the hip to another (when really they were depicting the two 'sides' of the Earth). In 1666, over three hundred years before *Northern Lights* was released, Margaret Cavendish published the weird and wonderful story of a woman's journey to *The Blazing World* (the protagonist is never named, but later in the story is referred to as the Empress). A year earlier, in 1665, a scientist named Robert Hooke published a book called *Micrographia*, in which he argued that microscopes – a new and exciting scientific instrument at the time – could show us, as he put it, 'new worlds.' This idea, of catching glimpses into new worlds, captured people's imaginations and Cavendish's story, which takes us on a journey into her own invented new world, was heavily influenced by such scientific claims.

In the story, an unnamed woman is abducted and taken onboard a ship that sails towards the North Pole. The crew die on the journey north but the woman is spared and when the ship reaches the North Pole it sails right through it and into a completely new world. We are told that our own world and this new world are joined at their poles:

for it is impossible to round this Worlds Globe from Pole to Pole, so as we do from East to West; because the Poles of the other World, joining to the Poles of this, do not allow any further passage to surround the World that way; but if any one arrives to either of these Poles, he is either forced to return, or to enter into another World²

Like *His Dark Materials*, *The Blazing World* takes place in a multiverse: a universe that consists in multiple worlds – not just different planets, but worlds that exist in their own dimensions (although there are only three worlds in Cavendish's story, while the number of worlds in *His Dark Materials* seems to be limitless). The woman now finds herself in a new world, the Blazing World, so-called because its sky is full of blazing stars regardless of whether it is day or night. To anyone who has read *Northern Lights*, the similarities between the first act of *The Blazing World* and the plot of the first book in the *His Dark Materials* trilogy are striking. *Northern Lights* follows Lyra's journey north where she discovers that the General Oblation Board have been separating children from their daemons at a research station in Bolvangar. When she finally escapes from Mrs. Coulter, thanks to the help of Iorek Byrnison, Lee Scoresby, and the witches, Lyra finds a bridge to the stars. Following this bridge, Lyra looks up at a 'blazing sky' before crossing.³ The book concludes on a cliff-hanger as 'Lyra and her daemon turned away from the world they were born in, and looked towards the sun, and walked into the sky'.⁴

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² Margaret Cavendish, A Description of a New World Called the Blazing World (printed by A. Maxwell: 1666). Accessed online: http://www.gutenberg.org/files/51783/51783-h/51783-h.htm (All references are to this edition.)

³ Philip Pullman Norther Lights (Point: London: 1995), p. 396.

⁴ Northern Lights, p. 397.

Polar Bears

Bears are also an important bridge across the three-hundred-year gap between *The Blazing World* and *His Dark Materials*. Iorek Byrnison (surely the best character in *His Dark Materials*: he's a talking polar bear who wears impenetrable armour, drinks heavily, and comes out on top in pretty much every scrap he's involved in), the fallen bear-king, accompanies Lyra on her journey towards the northern lights and saves her life on more than one occasion (and fixes Will's Subtle Knife later on in the story). Of course, she pays him back by helping him take back his throne in Svalbard, where the armoured bears live. But Lyra is not the only world-hopping protagonist who is rescued by talking bears. In the *Blazing World*, the heroine of the story, having crossed over to a new world via the North Pole, comes across a group of strange creatures. She looks across the icy landscape and sees: 'walking upon the Ice, strange Creatures, in shape like Bears, only they went upright as men'. She is afraid at first but soon realises that the Bear-men mean her no harm. In fact, she quickly realises that the

Bear-like Creatures, how terrible soever they appear'd to her sight, yet were they so far from exercising any cruelty upon her, that rather they shewed her all civility and kindness imaginable; for she being not able to go upon the Ice, by reason of its slipperiness, they took her up in their rough arms, and carried her into their City

Like Lyra, *The Blazing World's* protagonist is accompanied through the icy terrain to safety by human-like bears who, though they are strange and fearful in appearance, are ultimately kind and protective. Both protagonists eventually find themselves in a city inhabited by talking bears.

'Mad Madge'

These are some obvious similarities between Margaret Cavendish's *Blazing World* and Lyra's journey in *Northern Lights*. That's one reason fans of *His Dark Materials* should know about

Cavendish. But what's all this got to do with philosophy? Well, it's because Cavendish was best known during her lifetime as a philosopher – and quite a remarkable one at that. Before I outline Cavendish's philosophical views, I want to say a little about her life and the context in which she was writing.

Seventeenth-century England was a very different society to the kind of society in which many of us now live. It was an especially different place for women. It was very unusual for women to be educated, and even rarer for them to attend university, let alone write philosophy. It was said, by a public intellectual at the time named Samuel Johnson, that seeing a woman engage in intellectual pursuits was like seeing a dog walk on its hind legs: 'it is not done well, but you are surprised to find it done at all.' A woman writing philosophy in the seventeenth-century would find herself in a similar position to an atheist in Lyra's world where the Magisterium determine what is and isn't socially acceptable: derided, criticised, and, for the most part, marginalised. This is the intellectual climate in which Margaret Cavendish found herself. Yet, she defied social conventions to become both a prolific writer and the first woman to attend a meeting of the Royal Society of London, a prestigious group of scientists and philosophers in England.

Cavendish was nicknamed 'Mad Madge' because of her eccentric personality and dress sense, and because of the eclectic mixture of poetry, fantasy fiction, and philosophy she wrote over the course of her life. This unflattering nickname also reveals the extent to which women writers were dismissed by their male counterparts. Just as Lyra, the scruffy girl who enjoys mud-fights with the local boys in Oxford, is seen as an oddity by the stuffy scholars of Jordan College, Margaret Cavendish was viewed as a spectacle by most of her philosophical contemporaries. Samuel Pepys, the famous diarist, followed her around London for a week just to catch a glimpse of her! But like Lyra, despite social norms that placed limits on her

intellectual freedom, Cavendish made a lasting impact on the way we think about the world around us.

Is Everything Conscious?

Panpsychism is the philosophical view that everything in the world around us, from people like you or me, through to animals and plants, and all the way down the 'chain of being' as far as mountains, rocks, grains of sand, and bars of chocolatl, is conscious. Panpsychism sits somewhere between materialism, the view that everything is purely material or physical, and idealism, the view that everything is mental (idealists think that everything either *is* a mind or exists *in* a mind). Panpsychism, materialism, and idealism are three different philosophical systems or 'pictures of reality'. Idealism had its hey-day (largely in nineteenth-century Germany), and materialism was very popular for much of the twentieth-century (especially in the UK and US). Right now, however, panpsychism is an increasingly popular view.

Margaret Cavendish endorsed panpsychism long before it was anything like a mainstream philosophical position. Cavendish's argument is designed to make sense of the fact that we live in a well-ordered universe. She argues *backwards* from the fact that we live in a comprehendible and predictable world full of laws of nature (apples fall from trees, the sun rises in the morning, and where there is smoke there is fire) to the conclusion that everything in the world around us must be conscious. There's only one explanation for such order and regularity in her eyes: things in the world *must* be conscious. As she sees it, if every different part of nature were *not* conscious of what the other things in the world around it were doing, the world would be chaotic. But it isn't. So everything in nature *must* be conscious.⁵

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⁵ Cavendish makes this argument in Observations Upon Experimental Philosophy, edited by Eileen O'Neill (Cambridge University Press: Cambridge: 2001).

An example might help make her point clearer. Imagine walking down a busy street in Oxford whilst trying to read your alethiometer (or while texting on your phone). You would probably end up walking into a naptha lamp, another person, or (God forbid) someone else's daemon. This wouldn't happen if you pay attention to -i.e., if you were *conscious* of - what's going on around you. All of this means that if you walk down a busy street, and people aren't bumping into each other or their daemons, then you can reasonably infer that they are conscious of one another. Likewise, if you see someone stray into another person's path, you might reasonably assume they weren't paying attention. Cavendish thinks that the same is true of the universe in general. Things aren't chaotic, in fact, the workings of nature seem to make a great deal of sense. The more we learn about nature by engaging in biology, chemistry, and physics, i.e., the natural sciences (what Cavendish would call 'natural philosophy' and the scholars in Jordan college would call 'natural theology'), the more we can accurately predict what's going to happen in the world around us. We should understand the universe in general, Cavendish thinks, in just the same way we understand the various parts of the universe we interact with every day – just on a much greater scale. In this way, Cavendish gives us a philosophical reason to believe in panpsychism.

Dust and Consciousness

In *Northern Lights*, we learn that the scientists in Bolvangar, who cruelly conduct experiments separating children from their daemons, are interested in Dust. By the end of *The Amber Spyglass*, it has become very clear that Dust is at the root of conscious life as we know it. Philip Pullman himself said he was so interested in Dust, and what it might be, that he had to write a new trilogy (*The Book of Dust*) so he, and we, could learn more about it.

The Magisterium in Lyra's world and the scientists in Bolvangar are interested in Dust because they think it is connected to Original Sin. The Magisterium believe that by learning

more about Dust they will be able to better understand what happened after the Fall of Adam and Eve. However, in *The Amber Spyglass*, thanks to the research of Mary Malone and the time she spends among the mulefa, we learn that Dust is closely connected – and perhaps even the source of – consciousness. After she constructs the Amber Spyglass, Mary can see that humans like her or Will, as well as humans who have daemons (like Lyra or Lee Scoresby), are surrounded by Dust. She also realises that the mulefa are surrounded by Dust, whereas the other animals in their world which don't seem to be intelligent or capable of speaking, are not:

Everywhere she looked she could see gold, just as Atal had described it: sparkles of light, floating and drifting and sometimes moving in a current of purpose... where she saw a conscious being, one of the mulefa, the light was thicker and more full of movement.⁶

Mary learns, by using the Amber Spyglass, that *more Dust equals more consciousness*. All the worlds in *His Dark Materials* are full of Dust. The connection between Dust and consciousness makes the Magisterium begin to look even scarier. For, not only are they looking to impose an authoritarian regime on multiple worlds, but their fear of Dust indicates that they feel threatened by the very existence of consciousness itself.

Dangerous Philosophers in The Secret Commonwealth

The *His Dark Materials* trilogy contains many subtle allusions to panpsychism and philosophical theories about consciousness, especially as we learn more about Dust. However, in *The Secret Commonwealth* (volume two of *The Book of Dust*), the connection is much more explicit.

The book begins with Lyra as a university student in Oxford. We learn that she has read two books written by two popular philosophers: Simon Talbot and Gottfried Brande. Both are

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⁶ The Amber Spyglass, p. 243.

fictional philosophers but represent real philosophers (in our world), throughout history, who have painted pictures of reality that subtract from it life, knowledge, and consciousness (for another fictional philosopher, who has similar views to Simon Talbot, see Flann O'Brien's novel *The Third Policemen* which contains references to a fictional philosopher called de Selby who tells us that all of human experience is an illusion). We learn that Pan is not happy with what is suggested by Talbot and Brande's philosophical views because they imply that daemons are just an illusion too. In the end, this pushes Pan to leave Lyra and search for her lost imagination.

Pan is quite rightly frustrated by Lyra's obsession with these two philosophers. Simon Talbot, we learn, is "a radical sceptic, to whom truth and even reality were rainbow like epiphenomena with no ultimate meaning." Talbot's philosophy removes all meaning from the world, reducing human experiences to temporary, fleeting illusions, like a rainbow in the sky on a rainy day. Pan is even more alarmed by Gottfried Brande's philosophy which is presented in the form of a story set in a world where human beings have no daemons. The take-away message of Brande's philosophy is that daemons are an illusion too. As Pan puts it, "daemons are merely — what is it? — psychological projections with no independent reality." All of this is extremely worrying for Pan, who watches as Lyra is swept up by these two philosophers endorsing views that take all meaning, imagination, and even life out of the world they know (and we came to know in the original trilogy). Eventually, Pan tells Lyra that if this is what philosophy is like then philosophy itself is contemptible:

⁷ Two philosophers writing today who are 'illusionists' about consciousness are Daniel Dennett and Keith Frankish.

⁸ Philip Pullman, The Secret Commonwealth (Penguin: London: 2019), p. 79.

⁹ The Secret Commonwealth, p. 78.

If philosophy says I don't exist, then yes, philosophy is contemptible. I *do* exist. All of us, we daemons, and other things too – other *entities* your philosophers would say – we *exist*. Trying to believe nonsense will kill us. ¹⁰

Over the course of *The Secret Commonwealth*, Lyra's narrative arc takes her away from the views of these sceptical 'illusionist' philosophers and back to the belief that there really is life and knowledge in the world around us.

The message from Pullman could not be clearer: do not be fooled by those who tell you that life, knowledge, and consciousness are the privilege of people like us alone – or that it doesn't really exist at all. Like Margaret Cavendish, whose panpsychism offered a stark contrast with the mechanistic world-view defended by most of her contemporaries in the seventeenth-century, Pullman's aim is to show that there is no great divide between ourselves and the rest of the world around us: there is no line between conscious and unconscious (for *everything* is conscious). Although they have quite different reasons for doing so, both Pullman and Cavendish defend the view that we live in a living, knowing universe.

I'll finish with a passage from *The Amber Spyglass* that, in my opinion, makes it clear that, in Pullman's fictional universe, there is no divide between conscious and unconscious – that, in fact, that everything in the world around us contains life and knowledge. This is the moment that Roger's ghost steps out of the word of the dead through the window cut by Will:

The first ghost to leave the world of the dead was Roger. He took a step forward and turned to look back at Lyra, and laughed in surprise as he found himself turning into the night, the starlight, the air... and then he was gone, leaving behind such a vivid little burst of happiness that Will was reminded of the bubbles in a glass of champagne. ¹¹

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¹⁰ The Secret Commonwealth, p. 81.

¹¹ The Amber Spyglass, p. 382.