"A Great New Work" or "Demon-Trap": Attitudes Towards Technology in Philip Pullman's *The Shadow in the North*

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Philip Pullman's complex attitude towards science and technology has been noted by a number of critics writing on the author's *His Dark Materials* trilogy, but this attitude is nothing new in his work. Indeed, technology plays a significant role in a number of the author's novels for both older and younger children, including his Phoenix Award Honor Book *The Shadow in the North*. In this paper I will pose several questions concerning attitudes towards technology and science in that novel. Most basically, is scientific progress good or bad? Pullman's dislike for C. S. Lewis is widely known, but does he in fact share some of that writer's hostility towards the modern world? Does he believe that scientific progress inevitably leads to the dehumanization of those who immerse themselves in it? To what extent must technological innovation go hand in hand with the capitalist system that Pullman so despises? Most importantly, perhaps, if technology is not to be condemned wholesale, under what conditions does Pullman in fact find it worthy of both praise and support?

In The Shadow in the North, book two of the Sally Lockhart Quartet, Pullman's attempt to capture the feel of what he calls "Old-fashioned Victorian blood-and-thunder," complete, he says, with "a genuine cliché of melodrama right at the heart of it, on purpose" (www.philippullman.com). Although the novels do work as recreations of Victorian melodrama, Pullman is a much more conscious writer than were those nineteenth-century hacks that he imitates and sometimes spoofs; further, Pullman, as Claire Squires notes, "is uncompromising in his refusal to provide happy endings" (14). The books are intended to be taken seriously on a thematic level, and have important things to say about contemporary attitudes towards race, politics, education, gender, and class, with Pullman, as Nicholas Tucker suggests, providing "his own radical take on the social and political assumptions of that period, making sure that readers do a bit of thinking while enjoying the hectic action" (31). The Sally Lockhart books also brim with conscious irony and small, literary jokes. For example, in *The Shadow in the North*, Jim Taylor, a young man with a desire to make it as an author of melodramas, thinks highly of a contemporary penny dreadful called *Spring-Heeled Jack*, a tale Pullman was even then rewriting as a children's book. While Taylor is the author of an unproduced play entitled *The Vampire of Limehouse*, Pullman has written a play entitled Sherlock Holmes and the Limehouse Horror. Taylor, moreover, has submitted his play to the Lyceum Theater for consideration where it has been rejected because the topic is "played out" (97), by the theater's new manager, Bram Stoker, whose own Dracula lies more than a decade in the future.

Technology, however, lies at the center of *The Shadow in the North*. In the book's opening paragraph, we learn of the mysterious disappearance of the steamship *Ingrid Linde*, "the pride of the Anglo-Baltic shipping line." A brand new vessel, the *Ingrid Linde* is carrying a cargo of machine parts and clearly represents all that's new in Victorian-era ocean-going technology. The initial action of *The Shadow in the North* arises from Sally Lockhart's desire to find out why the ship sank and to retrieve the lost savings of a client who had invested in the ship. As that

action develops, Axel Bellmann, an industrialist and inventor, the richest man in Europe, and the owner of the cargo carried by the *Ingrid Linde*, will become the book's chief villain.

Pullman also has a deep love for the history of both the theater and photography, and the book is rich in its depiction of technology in both areas, particularly the latter. Sally's business partner and sometime suitor, Frederick Garland is a professional photographer (as well as an occasional private detective) and he, and his uncle, Webster, an "untidy genius who could create extraordinary poetry out of light and shade and human expression" (14) with his camera, are at the heart of new technological developments in this field. Their place of business is always in an uproar because they're constantly rebuilding the structure to house the latest photographic innovations, for example a "zoetrope studio," and "a fixed camera with a rapid plate-changing mechanism," and a "tracking camera" (131). Webster, who's absolutely crazy for new technology, even defends their somewhat prodigal spending on one innovation by arguing that "that's where the future lies—with a single camera. So the money's not wasted" (131). When Sally, in jest, suggests that they buy an entire field to build a new studio, Webster takes her seriously saying, "We'd have to build a wall and lay the rails perfectly level parallel to it. Facing south. We could make it as long as we liked. Roof it over with glass perhaps" (132).

The Garlands also have one of their assistants "working on more sensitive emulsions to allow faster exposures" (132). They believe that "If they could find a way of capturing a negative on paper instead of glass, they might be able to mount a roll of sensitized paper behind one lens" (133). The tracking camera, by the way, Webster's own invention and still existing only on paper, is based on the ideas of Eadweard Muybridge, a real Victorian photographer whose revolutionary new methods led to the development of motion pictures. Webster and Frederick can thus be seen as actually being on the cutting edge of photographic technology. To help with their workload, they're even contemplating the purchase of a typewriter, a machine only on the market at that time for five years (QWERTY).

The Garlands' photographic technology is necessary to the book's complex plot; Frederick uses a special camera to photograph and thus expose Nellie Budd, a fake medium who provides a number of important clues to the solution of the puzzle of the *Ingrid Linde*. Later, his expertise allows him and his assistant Jim Taylor access to the soon to be married daughter of a cabinet minister who also provides information. The central example of technological innovation in the novel lies elsewhere, however, and it is much more terrifying than anything implied by the prehistory of motion pictures. Throughout the first part of the book, we receive hints of the existence of something monstrous called the Hopkinson Self-Regulator. A number of these hints, oddly enough come from Nellie Budd, who despite her fake séances, nonetheless, seems to have some form of real psychic ability. Other hints come from Alistair Mackinnon, a stage magician who appears to share Budd's psychic gifts. Having entered a real trance, Budd first provides a number of clues as to the mechanism used to blow up the *Ingrid Linde* and then goes on about "Hopkinson....The Regulator. Three hundred pounds—four hundred—North Star! There's a shadow in the north...a mist all full of fire—steam, and it's packed with death, packed in pipes—steampipes—under the North Star—oh horrible..." (50).

The Hopkinson Self-Regulator turns out to be a truly devilish new weapon and Bellmann (whose name seems intended to call to mind Carroll's "The Hunting of the Snark") has murdered

any number of people to both secure control of its various patents and maintain secrecy. Applying the new technology of steam to the principle of the recently invented Gatling gun, he has created a weapon the size of a train car, which can fire thousands of bullets simultaneously for a prolonged period of time. Because the weapon is designed to be pulled by a train and can only fire at right angles to the tracks, however, (albeit in both directions), the Self-Regulator would be virtually useless as a battlefield weapon. Its enormous value lies in its ability to put down urban insurrections. It is, in short, a weapon of oppression, designed for use by totalitarian rulers against their own people. We are told that the Czar of Russia is very interested in the weapon and that, although there is as yet only one working model and it not yet fully tested, orders are beginning to come in from around the world.

In preparation for the revelation of the full evil of the Hopkinson Self-Regulator, Pullman devotes considerable time to the development of Axel Bellmann as a character. Critics have differed over exactly how evil Bellmann is. Hugh Rayment-Pickard suggests that "Bellman [sic] does not represent the wickedness of society or capitalism or anything else. Bellman's scheme must be destroyed, but Bellman's death is not a moral necessity" (8), and contrasts him to Ah Ling, the chief villain of the other Sally Lockhart novels, whom, he says, does represent absolute evil. Nicholas Tucker, however, describes Bellmann as "a hugely evil villain" who is about to "commit...the ultimate wickedness" (37).

Throughout the novel it is clear that Pullman is doing everything in his power to connect the industrialist with technology, turning him into a sort of virtual cyborg, at various times describing him as "mechanical" (75), as having "a factory-finished look about him [like] machined steel" (88), as a "huge dynamo" (108), and as having hair of a "metalic sheen" (310). Bellmann's factory, from a distance at least and in contrast to much industry of the time, is a marvel of streamlined modernity, "light, glassy structures for the most part, iron-framed and delicate to look at, and despite the presence of the chimneys and locomotives, everything in sight was clean and glittering and new...it looked like a mighty machine itself" (306-07). The industrialist's living quarters are sumptuous and "densely furnished" (324) but the standard exempla of the Victorian upper class, "prints on the walls—shooting scenes, fox hunting—...various sporting trophies.....One wall...entirely covered in bookshelves," feels ersatz; "not one of the books looked as if it had ever been opened. The room had the air of having been ordered complete from a catalog" (325). Bellmann's house is oppressively warm, heated unnecessarily by both a traditional fireplace, burning coke, however, (and thus higher tech than either wood or coal) and, even more newfangled, a radiator.

As the novel moves to its climax Sally sees Bellmann as a virtual personification of large-scale industry and commerce, a sort of demi-god of technology: "he was steam power, electric power, mechanical power, financial power made flesh. He kissed her hands again and again and his kisses were somehow charged with the sulfurous crackle she'd heard from the wires beside the railway lines" (337-38). This whiff of sulfur is not the only indicator metaphorically connecting Bellmann and his industrial undertakings with the demonic. At the very beginning of the novel, we learn that he earned his original money from a factory that made matches, or "lucifers" as they were commonly known (9). Later, his armaments factory, which was first praised for its look of cleanliness and delicacy when seen from a distance, up close

reveals "a hellish glare...inhuman and monstrous, the noises made by instruments of hideous torture...this world of metal and fire and death" (313).

For, Pullman, however, nothing is ever simple. Though Bellmann is clearly a villain, the author gives him a fair platform from which to argue his case for the necessity of murder and the value of high-tech weapons of mass destruction. Having killed any number of people, including Sally's fiancé Frederick, Bellmann defends his actions, claiming that the creation of the Self-Regulator is good for humankind because it is a weapon too horrible to use and will thus promote peace (327). Indeed he defends all of his actions, including the initial sinking of the *Ingrid Linde* and Frederick's murder on these grounds. Moreover he argues that "there are poor children in Barrow [the location of Bellmann's factory] who will eat and go to school because of what I have done. There are families in Mexico who will have medical supplies, clean drinking water, transport for the produce of their farms, security, education—all because I sank the *Ingrid Linde*. It was a completely humane act.... If I had not sunk the ship, a much greater number would have died—of starvation and poverty and ignorance and war" (328-29).

Pullman, of course, is well aware that such arguments have been used before, from the Wilsonian concept of the war to end all wars, through Machiavellian justifications for the use of the atomic bomb in Japan and, for that matter, as excuses for prophylactic wars of all sorts, from ancient times through the current to-do in Iraq. Nicholas Tucker also notes that such arguments have been made ironically in George Bernard Shaw's great play *Major Barbara*. Bellmann further argues both that the public is better off not knowing about how such decisions are made and that, even if they did know, they would not care. Power, both political and technological, he says, should be wielded by those who know how to do so, the economic, political, and technocratic elite.

Although Bellmann is not himself a reader (he has no time, he says, for poetry), he is rather fond of a quote he once heard from an English poet: "energy is eternal delight" (331). The line, of course, comes from "The Marriage of Heaven and Hell" by William Blake, one of Pullman's favorite authors. It is the voice of Satan speaking, but one must remember that, in Blake, Satan is, with some reservations, the good guy, the guy with energy who stirs things up and gets things done, much as Bellmann does. Sally is entirely unable to answer Bellmann's arguments at first: "She knew with some distant part of her that he was utterly wrong, that there were arguments to refute everything he said, but she knew she'd never find them now" (331-32). A moment later, she calls the Self-Regulator "a coward's weapon" and insists that Bellmann's workers loathe it. She further insists that if the British people knew about the gun, they "wouldn't stand for it" (332), but Bellmann contradicts her claiming that, other than "a few idealists, pacifists—harmless people" (332), the British would rally round the weapon. It is at this point that we are told, in a devastating admission, that Sally "knew that he was right" (333).

Later she once again tries to refute Bellmann, but her response is almost entirely emotional: "you're *wrong*, because you don't understand loyalty, you don't understand love, you don't understand people like Fredrick Garland..."(345). Further, she insists that all of Bellmann's humanitarian claims are meaningless because "the world you want to create is based on fear and deception and murder and lies—" (345). Her final response to Bellmann, however, is to herself resort to high-tech violence. Deceiving the industrialist into thinking she will marry

him, she convinces him to show her the one finished Self-Regulator. Once aboard she quite intentionally blows the weapon up, killing Bellmann and destroying the factory along with the remaining prototypes of the machine. Sally intends her actions to be suicidal, and her somewhat improbable survival of the explosion is merely a matter of luck.

Throughout *The Shadow in the North*, Pullman makes a point of juxtaposing the fantastic (either real or bogus) with the technological. The repeated equation of Bellmann and his high-tech factory with both the machine-like and the demonic has already been mentioned. The description of the disappearance of the modern steamship *Ingrid Linde* comes replete with references to the *Mary Celeste*, the *Flying Dutchman*, and Atlantis. Both the fake medium, Nellie Budd, and the stage magician, Alistair Mackinnon, use technology to work their tricks, but, as it turns out, they also have some actual psychic ability. Frederick attends the séance, but uses technology in the form of a new type of camera to unmask the medium. Meanwhile, Jim Taylor's back stage activities give the reader a sense of the technological nature of Victorian theater, but, when Jim climbs high into the upper reaches of the playhouse and looks down, he sees "yawning abysses below, where sooty figures manipulated fire...a picture of hell" (25), a scene not all that different from what Sally sees in Bellmann's factory.

Ultimately, it is hard to decide where Pullman stands on the issue of technology. That he is thrilled by the technological innovations inherent in the photography of the period, and the new potential these innovations create for art is clear. But it is equally obvious that he is outraged by what Michael Cart has called "the moral implications of the Industrial Revolution and the dehumanization of man by machine" (112). *The Shadow in the North* contains numerous references to such abuses, for example the dangerous working conditions in Bellmann's Swedish factories, which led young girls to develop "necrosis of the jaw" (9). Still, Pullman does give the industrialist a bully pulpit for arguing that the good, the "energy" perhaps, that comes from large-scale industrial technology outweighs the bad, and an early comparison of his Barrow factory to Robert Owen's utopian New Lanark experiment, although seen as negative by the conservative lawyer who brings it up, might be taken as more positive by modern readers (85). Further, Sally's counterarguments are weak at best.

Perhaps the answer ultimately lies with William Blake, himself a significant critic of the new and often abused industrial technologies of his day. If we remember that Blake was not so much siding with the Devil as calling for an even playing field, a "marriage" between "heaven," that is the rule of law and tradition as personified by God, and "hell," that is energy, creativity and change as personified by Satan, we may be able to come to terms with Pullman's complex attitude towards technology. Clearly he loves innovation. The new technology of the camera excites him, and he allows Bellmann too good of an argument to be seen as entirely rejecting industrial development. Rather it is the abuse of that technology that offends Pullman. By taking over control of both the economy and the government as he is attempting to do, Bellmann is setting himself up as both God and Satan. He wants not just to create new technology, Satan's role, but take total control of its use, God's role, and therein, perhaps, lies his error.

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