

## Superintelligence and Mental Anxiety from Mary Shelley to Ted Chiang

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While not the first literary text to do so, Mary Shelley's *Frankenstein* (1818) established the dichotomy of the creator and the created, and the anxieties revolving around intelligence as an ongoing and ever-evolving sf trope. Recent studies into the relationship between intelligence and anxiety suggest a direct correlation between the two concepts. In 2014, Alexander Penney conducted a study of 126 undergraduate students where he discovered that those with a higher than average verbal IQ tended to worry more. The basis of these worries tended to be more existential in nature, as opposed to the more experiential anxieties of those with a lower verbal IQ; concerns about personal past events and similar. Penney states in the abstract to the study: 'verbal intelligence was a unique positive predictor of worry and rumination severity. Non-verbal intelligence was a unique negative predictor of post-event processing' (Penney 2015: 90). The study, as paraphrased by Christian Jarrett for The British Psychological Society, explained these 'two seemingly contradictory correlations' by concluding that 'more verbally intelligent individuals are able to consider past and future events in greater detail, leading to more intense rumination and worry' (Jarrett 2014). This idea opens up avenues of discourse revolving around the construction of personal identities and realities through intelligence, and more specifically language and the idea of *understanding*.

Although this study is a relatively recent, twenty-first century examination, sf has been toying with ideas of intelligence, language, and anxiety since its conception. Nick Bostrom defines a *superintelligence* as 'any intellect that vastly outperforms the best human brains in practically every field, including scientific creativity, general wisdom, and social

skills' (Bostrom 2009: 277). Much of the time, in science fiction, these superintelligences experience social alienation due to the incompatibility between their heightened cognitive intelligence and their emotional understanding. The social and intellectual isolation of Shelley's Creature arguably established many of these dominant sf tropes in subsequent treatments of hyper-intelligence. It is important to note that this article will not engage with superintelligence in terms of the technological Singularity. Many of the ideas surrounding the concept are similar, but due to the definition of it as a 'future period during which the pace of technological change will be so rapid, its impact so deep, that human life will be irreversibly transformed' (Kurzweil 2006: 7), it operates as a warning of future superintelligences, rather than an exploration of the anxieties surrounding intelligence and intellect, which is what this article will explore.

Within these ideas, the concept of language is essential. The arbitrariness of it, and its use in forming intelligence, means that its use in depictions of heightened or exaggerated intellects can often reveal the inadequacy of a structure of symbols intended to replicate and represent reality – a very Saussurean idea. Ned Block draws out a problematic definition of how we interpret intelligence as he writes of the difference between 'linguistic' and 'empirical' intelligence:

Defining a word is something we can do in our armchair, by consulting our linguistic intuitions about hypothetical cases, or bypassing this process, by simply stipulating a meaning for a word. Defining (or explicating) the thing is an activity that involves empirical investigation into the nature of something in the world. (Block 1995: 377)

It is this distinction that will be shown to break down in literary depictions of heightened intelligences, as they often surpass the somewhat limiting conventions of language. It will expose the contradictory idea of language as opening up the world to these intelligences, while at the same time alienating and isolating them within their own anxieties. Language, and indeed literature, are often used as a means of showing how these intellects assimilate experience and the world around them, before then being used to portray intelligent anxieties and worries.

Shelley's *Frankenstein*, and more specifically the development of the Creature and its acquisition of knowledge and intelligence, anticipates the trope of emotionally-alien superintelligences that may be found in subsequent literature. It allows their creators to engage with anxieties revolving around intellect and depression. Intelligence and knowledge are treated reverentially in *Frankenstein*; they are admired, but also feared – a Promethean gift as likely to blind as it is to enlighten. As Victor Frankenstein begins to explain his story to Captain Walton, he warns: 'You seek for knowledge and wisdom, as I once did; and I ardently hope that the gratification of your wishes may not be a serpent to sting you, as mine has been' (Shelley 1998: 17). Following the birth of his Creature, Frankenstein envisions intelligence as corrupting, as suggested by the biblical allusion to the serpent. This image also creates connotations of desire, and how a 'gratified intellect may become dissatisfied with other aspects of life.' This idea is elaborated upon as Victor further explains: 'Learn from me, if not by my precepts, at least by my example, how dangerous is the acquirement of knowledge, and how much happier that man is who believes his native town to be the world, than he who aspires to become greater than his nature will allow' (Shelley 1998: 35).

Shelley establishes Victor as an advocate of the proverbial idea that 'ignorance is bliss' at this point, while also acknowledging the connection between intelligence and an emotionally unstable mind as proved by Penney almost 200 years later. This was an idea expanded on later in the nineteenth-century as post-Darwinian ideas led to Frank Chalice Constable writing a novel entitled *The Curse of Intellect* (1895). Telling an evolutionary story about a monkey who is made hyper-intelligent thanks to revolutionary drugs, Constable extols a similar incompatibility of intellect and happiness to that of Shelley: 'All that separates man from other beasts is reason. By intellect he is higher than all other created beings. It must be right that intellect should be developed even at the expense of happiness' (Constable 1895: 10). Margaret Atwood summarises this kind of scientist as those who 'prefer their own arcane knowledge and the demonstration of their power to the safety and happiness of those whom they ought to love and cherish. In this way they are selfish and cold, much like the Lagadan projectors who stick to their theories no matter how much destruction and misery they may cause' (Atwood 2012: 204-5). Again, in Atwood's analysis, intelligence and happiness are somewhat at odds; they seem to be oppositional concepts, and a pursuit of one will limit an individual's capacity for the other. There is something narcissistic about these scientists' desire for intelligence, something that Frankenstein reflects on often in Shelley's text, in that it is ultimately a selfish goal and incompatible with homely happiness. Intelligence, and the creation of things out of that intelligence, is seen as a decidedly negative thing; these individuals being driven to a clinical desire to accumulate knowledge. We may witness an even more focused example of this in the minds of the beings they create. Frankenstein's Creature, and his mental development in both an intellectual and emotional sense, is markedly alienated by his augmented intelligence – a

trend that develops in subsequent sf, particularly in the form of Isaac Asimov's Robots, and Charlie from Daniel Keyes's *Flowers for Algernon* (1966).

In his introduction to *The Rest of the Robots* (1967), Asimov reflects on writing monsters, dwelling particularly on the relationship between creator and creation in Shelley's *Frankenstein*. He states: '*Frankenstein* achieved its success, at least in part, because it was a restatement of one of the enduring fears of mankind – that of dangerous knowledge. Frankenstein was another Faust, seeking knowledge not meant for man, and he had created his Mephistophelean nemesis' (Asimov 1978: 11). Knowledge is the enemy of man, Asimov suggests, before further claiming that Victor Frankenstein could not create a creature with a soul, as that was God's duty, and that Frankenstein creates a 'soulless intelligence' (11). This is certainly something that lingers in sf depictions of creators and their creations, as well as impacting upon treatments of intelligence in a way that suggests the lack of empathy and detached nature of superintelligences. Heightened or augmented intellects are often depicted as ultimately cold and rational; too utilitarian in their psyches to accommodate for aspects of the human spirit or soul.

Asimov's 'Satisfaction Guaranteed' (1951) reiterates anxieties surrounding heightened intelligence and the related dearth of more spiritual emotion. The short story tells of the robot Tony, designed to be a companion of Claire Belmont, who eventually falls in love with the machine. Tony, responding to Claire's suggestion that robots will put ordinary house-workers out of business, states that: 'There is work of much greater importance they can be put to in the world, once they are freed of drudgery. After all, Mrs. Belmont, things like myself can be manufactured. But nothing yet can imitate the creativity and versatility of a human brain, like yours' (Asimov 1978: 108). Asimov presents another example here of a perceived discord between rationality and creative thought. Indeed,

Asimov's robo-psychologist Susan Calvin remarks at the denouement of the story that what may be considered as the robot's love for its human companion could be considered a result of its programming:

Love! Peter, you sicken me. You really don't understand? That machine had to obey the first law. He couldn't allow harm to come to a human being, and harm was coming to Claire Belmont through her own sense of inadequacy. So he made love to her, since what woman would fail to appreciate the compliment of being able to stir passion in a machine – in a cold soulless machine. (Asimov 1978: 120)

The mechanical ratiocination of the machine envisions love as a by-product of inadequacy; something that can easily be slotted into an algorithm or equation. There is a similar weakening of emotion in *Frankenstein* as Victor ruminates on what his father may think of his scientific aims, claiming that man should 'always to preserve a calm and peaceful mind, and never to allow passion or a transitory desire to disturb his tranquillity. I do not think that the pursuit of knowledge is an exception to this rule. If the study to which you apply yourself has a tendency to weaken your affections, and to destroy your taste for those simple pleasures in which no alloy can possibly mix, then that study is certainly unlawful, that is to say, not befitting the human mind' (Shelley 1998: 37). The idea that the pursuit of knowledge can 'weaken your affections' is important, and exposes the ongoing influence of *Frankenstein* in imbuing stories of creators and their creations with anxieties surrounding the relationship between emotion and intellect.

The cold harshness of absolute intelligence is also portrayed in another of Asimov's short stories – the fittingly titled 'Reason' (1941). Cutie (or QT-1) conveys similar ideas of the perceived irreconcilable gulf between reason and emotion. The robot places itself above humanity, with a cold arrogant indifference to anything other than reason: 'I, a reasoning being, am capable of deducing Truth from a priori causes [...] Your minds are probably too coarsely grained for absolute Truth' (Asimov 1996: 77). Cutie draws a distinction between the overtly rational and the emotional, complicating the dynamic between creator and creation in its unwillingness to accept the slightly improbable idea that Powell and Donovan created him: 'I accept nothing on authority. A hypothesis must be backed by reason, otherwise is it worthless – and it goes against all the dictates of logic to suppose that you made me' (Asimov 1996: 66). This existential questioning stems from Cutie's super intelligence and its inability to take things as they are, due to the requirement that everything should have rational and logical reasoning behind it. When told of the 'fact' that Powell and Donovan created him, Cutie responds biliously: 'Globes of energy millions of miles across! Worlds with three billion humans on them! Infinite emptiness! Sorry Powell, but I don't believe it' (Asimov 1996: 64). The robot's intelligence, designed to run independently from humans, leads it to a kind of existential dread, characterised through its 'grim' tone and musings on the 'infinite emptiness' of everything (64), a rationalism that stems from its Cartesian mode of thinking: 'I, myself, exist, because I think' (Asimov 1996: 66). Jessica Stone uses Abraham Maslow's hierarchy of needs to dig further into Cutie's reality and mindset:

Part of the problem with QT-1's reasoning is that it is based on self-centred thoughts. It is not reaching beyond to self-actualisation, but rather stuck in

the idea that surely these fleshy inferior beings cannot have created it. The idea of that being true is repulsive to it, so it chooses to find another truth. (Stone 2015)

This question of identity, and the denial of the creator while trying to find a place within the world may be considered as a textual echo of *Frankenstein* – the ongoing influence of which has led to Sherryl Vint terming Shelley's novel the archetypal sf 'megatext' (Vint 2014: 57). When confronting its creator, Frankenstein's Creature begs the answer to 'What was I? The question again recurred, to be answered only with groans' (Shelley 1998: 97). It is a similar kind of self-awareness to Cutie's that leads to the Creature's melancholy thoughts. The Creature pleads with Frankenstein in a way that explores the connection between knowledge, rational thinking, and anxiety:

I cannot describe to you the agony that these reflections inflicted upon me; I tried to dispel them, but sorrow only increased with knowledge. Oh, that I had for ever remained in my native wood, nor known or felt beyond the sensations of hunger, thirst, and heat!' (Shelley 1998: 96).

The Creature maligns the pursuit of knowledge as something that brings 'agony', even if it does lift minds higher than basic drives of desire, intelligence elevates the human to a place of ambiguous purpose. The language of the Creature's subsequent anti-intellectual diatribe is particularly important:



Of what a strange nature is knowledge! It clings to the mind when it has seized on it, like lichen on the rock. I wished sometimes to shake off all thought and feeling; but I learned that there was but one means to overcome the sensation of pain, and that was death – a state which I feared yet did not understand. (Shelley 1998: 96-7)

Knowledge is deemed to be somewhat unnatural, an unwelcome presence in a more serene psyche – it is a ‘lichen’, a fungal growth that ‘clings’ to the mind. Frankenstein’s Creature has been awakened intellectually, and it curses him with existential loneliness and isolation, emboldening his drive towards death. Absolute absence from thought is preferable to his newfound mind.

There is a similar idea at work in Daniel Keyes’ *Flowers for Algernon*, where Charlie, a mentally retarded bakery worker, is given incredible intelligence after undergoing experimental scientific treatments. As his intellect and IQ escalate, so too does a deep anxiety rooted in isolation and alienation caused by enhanced self-awareness. When Charlie confronts the doctors and scientists who created this new version of himself, he berates their unethical pursuit of knowledge in a similar way to Frankenstein’s Creature:

Here in your university, intelligence, education, knowledge, have all become great idols. But I know now there’s one thing you’ve all overlooked: intelligence and education that hasn’t been tempered by human affection isn’t worth a damn. (Keyes 2002: 173)

Charlie's augmented genius results in his dissociation of knowledge from emotion; the purest pursuit of intelligence eschews irrational ideas of love and affection. Knowledge should be 'tempered' in Charlie's view, yet the position of observer that his intelligence has afforded him leaves him feeling isolated and alone. Charlie elaborates on this as he states to Professor Nemur:

Intelligence is one of the greatest human gifts. But all too often a search for knowledge drives out the search for love. This is something else I've discovered for myself very recently. I present it to you as a hypothesis: Intelligence without the ability to give and receive affection leads to mental and moral breakdown, to neurosis, and possibly even psychosis. (Keyes 2002: 173)

Again, intelligence is considered to be a 'gift', yet one that is accompanied by its own poisonous barbs. Charlie draws a division between knowledge and love, further emphasising *Frankenstein's* legacy of a gulf between intellect and emotion; or a parallel between heightened intelligence and decreased moral empathy due to a hyper-awareness of self.

Charlie also highlights how intelligence can result in a 'moral breakdown', which may also be witnessed in Shelley's *Frankenstein* and his creation, as well as in Asimov's robots. Charlie is a fascinating case study, and more nuanced than these other intellects as through Keyes' epistolary style, we witness Charlie's intellect changing from low to high and back to low again. Charlie is infinitely happier when working in the bakery and not being intelligent, yet his enhanced intellect does not totally yearn to regress back to his simpler and more ignorant self:

I have often reread my early progress reports and seen the illiteracy, the childish naïveté, the mind of low intelligence peering from a dark room, through the keyhole, at the dazzling light outside. In my dreams and memories I've seen Charlie smiling happily and uncertainly at what people around him were saying. Even in my dullness I knew I was inferior. Other people had something I lacked – something denied me. In my mental blindness, I had believed it was somehow connected with the ability to read and write, and I was sure that if I could get those skills I would have intelligence too. (Keyes 2002: 139)

Charlie's awakening is not simply something that can be rescinded; his memories have been brought into a new light due to his advanced understanding and IQ. It is a new enlightenment, something emphasised through Charlie's description of existing in a dark room peering through a keyhole of light. It is reminiscent of Plato's allegory of the Cave, a comparison embellished by Keyes' use of an extract from Plato's *Republic* as a preface to the text, and by Charlie's later exclamation that he 'can't go back down into that cave' (Keyes 2002: 175) as his intelligence begins to desert him after the treatments begin to stop working. Indeed, as he explains that he wants the sessions and experiments to stop as he 'doesn't want to see any more', his lingering intellect derides him: 'And now, Plato's words mock me in the shadows on the ledge behind the flames: "the men of the cave would say of him that up he went and down he came without his eyes"' (Keyes 2002: 199). Keyes' language centres around perceptual and visual lexemes; Charlie has been enlightened, he can see and understand the truth of the figures on Plato's wall, yet his mental regression

back to his former self leaves him without eyes – without the necessary means of perception which plunges him back into a more serene ignorance.

Plato's cave is an ideal metaphor for the types of anxiety within intelligence that *Frankenstein* and its sf forebears attempt to portray. Within it, Plato aims to address 'the effect of education and the lack of it on our nature' (Plato 2003: 220). The allegory focuses on educated perceptions, and the ability to see through matrixes of meaning and social construction, and understand the ideal Forms of reality. Plato reflects on the effects of being exposed to this truth, or enlightened, in a way similar to Charlie's experience. He suggests that the individual freed from the cave would attempt to turn back to what they are used to:

If he was forced to look at the light itself, wouldn't it hurt his eyes? Wouldn't he turn away, and run back to the things he *could* see? Wouldn't he think those things really were clearer than what was being pointed out? (Plato 2003: 220)

This accounts for the existential dread of Frankenstein's Creature, Cutie and Charlie, as they are all creations that have been enlightened in their individuality and their relationship with their creators. Once aware of their development, and intellectually awakened, they can no longer look back, and are forced to wrestle with complex ideas of self and reality. In Charlie, we witness how his augmented lucidity and ability to perceive and understand from a higher perspective cause him to turn back to his past self due to his anxiety and mental isolation. When Charlie goes on a 'strange kind of anti-intellectual binge', he moves from

'movie house to movie house' in Times Square in a sequence that is very tonally similar to Plato's allegory:

I told myself I was looking for something in the make-believe screen world that was missing from my new life. Then, in a sudden intuition, right outside the Keno Amusement Center, I knew it wasn't the movies I wanted, but the audiences. I wanted to be with the people around me in the darkness. (Keyes 2002: 137)

The 'make believe screen world that was missing' from Charlie's new life appears to indicate the inadequacy he feels in participating in reality when his intellect now knows reality to be largely a fiction. The cinema takes the place of Plato's cave here, the silver screen displaying hyperreal images that distort the truth. Charlie's yearning for fraternity with the cinema patrons is further evidence of his desire to slip back into wilful ignorance; to not question the shadows on the cave wall, but live as a less enlightened but ultimately happier self.

What is acknowledged in Plato's allegory, and the augmented intelligences of *Frankenstein*, Asimov's *Robots* and *Flowers for Algernon's* Charlie, is the ability to deconstruct reality in a semiotic sense. Each of these characters are imbued with the intellectual capacity to learn, to understand, and to deconstruct. They are able to perceive the Barthesian structure of myth, and pick apart signs and the ideas they signify to the extent where language is unsettled, thus causing a disturbed relationship with their own self due to the alienation and isolation caused by existing within a system that they can see through. Roland Barthes' concept of the myth is not limited to traditional ideas of the spiritual and supernatural, in fact what he suggests is that 'the special trick of the myth is to

present an ethos, ideology or set of values as if it were a natural condition of the world, when in fact it is no more than another limited, man-made perspective' (Morus-Baird 2014). Ultimately, this is an issue that can be pared down to language, in a comparable way to Penney's study into how a higher *verbal* IQ leads to more anxiety and worry. Barthes suggests that reality, or the 'myth' that is generally accepted to function as reality, 'wants to see in [alphabetical or pictorial] writing only a sum of signs, a global sign, the final term of a first semiological chain' (Barthes 1993: 114). The augmented intellects discussed here see through this linguistically networked idea of reality and, instead, expose the myth behind it. These intellects' awakenings happen as they expand their verbal capacity. Charlie reflects on the slippery and arbitrary nature of language as he notes in his progress reports:

Am I a genius? I don't think so. Not yet anyway. As Burt would put it, mocking the euphemisms of educational jargon, I'm *exceptional* – a democratic term used to avoid the damning labels of *gifted* and *deprived* (which used to mean *bright* and *retarded*) and as soon as *exceptional* begins to mean anything to anyone they'll change it. The idea seems to be: use an expression only as long as it doesn't mean anything to anybody. *Exceptional* refers to both ends of the spectrum, so all my life I've been exceptional. (Keyes 2002: 106)

Charlie deconstructs the principles of language here in an attempt to formulate an idea of his own self. The resultant relativism destabilizes the idea of language as a system when scrutinised in such detail. He acknowledges the instability of language, and therefore the definitions of his reality and identity, as he notes the flexibility of a single term in elaborating on different concepts. It is this awareness that causes his emotional

disconnection, further emphasising Penney's scientific study into verbal capacity and mental anxiety. Charlie even acknowledges a similar theory himself:

I can't help but admire the structural linguists who have carved out for themselves a linguistic discipline based on the deterioration of written communication. Another case of men devoting their lives to studying more and more about less and less – filling volumes and libraries with the subtle linguistic analysis of the *grunt*. Nothing wrong with that, but it should not be used as an excuse to destroy the stability of language. (Keyes 2002: 148)

Charlie reflects on linguistic stability, but his IQ does not permit him to be immersed within language; instead he now exists outside of it, but paradoxically still restricted by the necessary use of it. In fact, the emotional effectiveness of Keyes's writing style tragically reflects this, as Charlie's 'progris riport's' transition from very observational statements about his life in the bakery, to lexically dense reflections on the nature of existence, before regressing back to simpler language and looser grammar as Charlie's mental capacity deteriorates. Charlie commends the men for 'studying more and more about less and less' – a paradoxical idea but one that presents the truth of the search for knowledge. Knowing more only makes one more aware of that which they do not know.

The Creature's melancholy emerges after he similarly acknowledges the importance of language, establishing a trope that other augmented intelligences since have adapted. The Creature is confused when first experiencing the world – he can see it, but to *understand* he needs frames of reference, points of comparison; language: 'Sometimes I tried to imitate the pleasant songs of the birds, but was unable. Sometimes I wished to

express my sensations in my own mode, but the uncouth and inarticulate sounds which broke from me frightened me into silence again' (Shelley 1998: 81). For the Creature, language is both a means of interfacing with the world and an introduction to true emotion. He desires language – his own sounds 'silence' him. Upon his early encounters with the cottagers, he states:

By degrees I made a discovery of still greater moment. I found that these people possessed a method of communicating their experience and feelings to one another by articulate sounds. I perceived that the words they spoke sometimes produced pleasure or pain, smiles or sadness, in the minds and countenances of the hearers. This was indeed a godlike science, and I ardently desired to become acquainted with it. (Shelley 1998: 88)

The Creature, and one may presume Shelley herself, envision language as a 'godlike science' due to its ability to 'produce' or create, states of emotion, reality, and identity. Language is the true tool of creation, not Victor Frankenstein's arcane sciences. It is language and literature that truly awaken the Creature; he colludes in the Barthesian myth after acknowledging the distinction between sign and signified ('I conjectured, therefore, that he found on the paper signs for speech which he understood'), and unravels human nature and history through his own readings. As his awareness grows, and he questions whether 'man [was], indeed, at once so powerful, so virtuous, and magnificent, yet so vicious and base?', he claims that 'The words induced me to turn towards myself' (Shelley 1998: 96). He is forced into an introspective melancholy by his introduction to human society and culture through language and literature. His exaggerated awareness causes him to feel outcast and



alone. Upon reading *Paradise Lost*, *Plutarch's Lives* and *The Sorrows of Werter*, the Creature becomes yet more hyper-aware: 'I can hardly describe to you the effect of these books. They produced in me an infinity of new images and feelings, that sometimes raised me to ecstasy, but more frequently sunk me into the lowest dejection' (Shelley 1998: 103). The Creature's blank innocence is corrupted once exposed to linguistic realities. It is *Paradise Lost* that makes him realise 'Like Adam, I was created apparently united by no link to any other being in existence' (Shelley 1998: 105). His depressed mental state is caused by his enhanced vocabulary, and the ability to not only observe but also contemplate and understand. This is similar to Cutie's belief in the 'Master' – the robot needs to believe in something, a *myth*, to explain its position within the world.

Reading and understanding language is also a vital component in Ted Chiang's modern reappraisal of the Frankenstein mythos, the appropriately titled short story 'Understand' (1991). Reading at an accelerated rate following similar experimental intelligence treatment to Charlie causes Chiang's narrator to go through an augmented intellectual awakening. 'No matter what I study', says the narrator, 'I can see patterns. I see the gestalt, the melody within the notes, in everything: mathematics and science, art and music, psychology and sociology' (Chiang 2015: 48). His intelligence causes sociopathic, detached behaviour, as well as the ability to see through reliant networks of human thought and behaviour. He reflects on the nature of language in constituting perceptions, criticising linguistic theory and picking apart the structuralist ideas of sign, signifier and signified. In a similar diatribe against language to those of Charlie, the narrator states that he is 'designing a new language. I've reached the limits of conventional languages, and now they frustrate my attempts to progress further. They lack the power to express concepts that I need, and even in their own domain, they're imprecise and unwieldy' (Chiang 2015: 61). The narrator's

intelligence is moving beyond the order of linguistic reality. He becomes detached from human emotion and morality through the disintegration of language; it is not precise enough for his hyper-rational mind.

Upon his creation of the new language – a language basically made for one – he states that ‘Initially I am overwhelmed by all this input, paralysed with awareness of my self’ (Chiang 2015: 66). His hyperawareness causes him to feel emotionally isolated from his society, due to him being able to perceive influence from all angles. It correlates with Penney’s psychological study into anxiety and intelligence; as his IQ increases, so does his potential to become anxious about imagined potentialities. This culminates in him stating:

I’ve gone into the outside to reobserve society. The sign language of emotion I once knew has been replaced by a matrix of interrelated equations. Lines of force twist and elongate between people, objects, institutions, ideas. The individuals are tragically like marionettes, independently animate but bound by a web they choose not to see; they could resist if they wished, but so few of them do. (Chiang 2015: 68)

Chiang’s description of the narrator’s perception again evokes Plato’s allegory through its references to enlightenment and the choice not to break out of the webs of influence.

Chiang engages with one of the most dominant modes of critical thinking here, the notion of social construction, in a way that seems to allegorise his narrator’s alienated hyper-intelligence with feelings of isolation and awareness that accompany higher intelligence.

The narrator uses terms like ‘sheer torture’, ‘detached’ and a ‘state beyond mere insanity’ to describe the dislocation he feels in his hyper aware mind.

Shelley's notion of language as a 'godlike science' is given credence by the aforementioned characters. Language constitutes reality, as well as representing it. When caught within it, these newly intelligent beings determinedly see through the matrixes of meaning, or attempt to create their own. This also corroborates Penney's scientific study, as it is seen that the intellects with a higher verbal capacity find themselves with the opportunity to ruminate and ratiocinate more on potential things, rather than simply processing experience like those with a lower verbal IQ. This more often than not leads to a social disconnection with others, and an isolated, alien self that emerges instead. The dichotomy of creator and created is equated with the relationship between the sign and signified of language. Language can create, yet language also creates difference. The heightened intelligences of Frankenstein's Creature, Asimov's robots, Keyes' Charlie, and Chiang's narrator of 'Understand' all reflect on the nature of creation, and how it is in fact language, and not science, that creates their newly wrought identities.

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