

The Possibility of Love

Father, Son, and the lovelorn spirit of a (monster) man, (neural network) woman and (mecha) child

*Where does the mind reside?
What is the nature of memory?
What are the roles of emotions?
What sort of representations does the brain use?
What does our visual system compute?
How did evolution shape us?
How do we learn?
What is consciousness?¹*

Rodney Brooks, the director of MIT's prestigious Artificial Intelligence (AI) Laboratory poses the above questions on the website of the world's leading AI hot-bed, founded with the express mandate of enabling machines to think like human beings. It is interesting that even forty-four years after the lab's inception, questions like what does it mean to be human, what is love, or what do we owe our creations, find no space, either on the above list or anywhere else on the site. Yet it is these very questions that are the vital ones, whether one is navigating physical spaces like MIT or fictitious terrains like the organic world of *Frankenstein* and the cybernetic universe of *Galatea 2.2*², and more so today than ever before as rapid biotechnology and robotic advances push us towards the razor-edge of reality as we know it.

This paper will contemplate these essential issues of humanness, love and the responsibilities and limitations of (pro)creation. We will examine the contrasting parenting styles of Victor Frankenstein and the fictional Richard Powers towards their

respective progeny and argue that despite their seemingly divergent methods, both creators ultimately fail in the discharge of their responsibilities, but this failure is as much theirs as that of the essential non-humanness of their creations. In our analysis, we shall use David, the mechanical boy (mecha) from Spielberg's *AI* (2001), as a trope; his (perfect) human body encasing the "hundred miles of fibre"³ within, combined with his desperate need for/to love despite knowing his non-human nature, helps him serve as a bridge between the piece-assembled flesh and bones Monster and the placid neural network being compared, and also their apotheosis.

Frankenstein and *Galatea 2.2* are both elaborate treatises on parenthood. For example, *Frankenstein* deals with not only the central Frankenstein-Monster relationship, but also Elizabeth as the mother figure of the Frankenstein household, Justine Moritz and her position with the Frankensteins, the De Lacey family (appropriated as parents by the Monster), and more. In the same fashion, *Galatea* has the Richard-Helen parent-child relationship offset against Richard's own relationships with his father, his mentor Taylor and C, C's own bond with her parents, Diana and her children, Lentz and his paternal inclinations for his mentally ill wife, and Harold and his daughters.

To be a parent is akin to playing god. Whether it is one's own biological offspring, or a mechanical, assembled entity, the very act of creation is god-like in its nature. But playing god/parent has certain implicit responsibilities that accompany the role. One posits that for the creator, these responsibilities may be fulfilled in the four domains of life (birth), knowledge (cognitive development), freedom (self-actualization)

and love (emotional nourishment). Let us see how Richard and Victor perform their duties within these domains.

Life

The giving of life is the basic mandate of procreation. We observe that the creation of both the Monster and Helen resemble the human birth process. First incubation, then a long pregnancy, followed by delivery. (Which, in the case of Frankenstein, is accompanied by an extreme postpartum psychosis!⁴) The process consists of both assembly (in *Frankenstein*, of “fibres, muscles and veins”,⁵ and in *Galatea*, of scaleable workstations, input/output devices and arrays of neurodes attached to a giant supercomputer) and ignition (Frankenstein’s literal “spark of being”⁶ and Lentz’s plugging in of Helen’s neural network). However, the intent behind the two creations differs. For Powers it is a wager on his ability to teach a machine to read a canon of works, whereas for Frankenstein, it is the loftier ideal to “renew life, where death had apparently devoted the body to corruption”⁷.

Note that the actual *act* of creation is only alluded to and not explained in depth in either instance. Most gods don’t explain their miraculous acts either, why blame these human creators for wanting to cling on to their secrets? In this case, one would think it would be more interesting to try and understand the way the two creations *feel* about themselves as distinct human-like entities rather than examine the method or reasons for their creation. Both the Monster and Helen have been granted life, but do they feel *alive*

in the same way that we do? And, do their respective creators empower them with a feeling of distinctness?

For the Monster, his behavior seems to stem from extreme parental neglect, or even child abuse. Frankenstein simply abandons his baby at birth. He doesn't even give his progeny a name! He ignores the "grin", "inarticulate sounds" and "outstretched hands"⁸ that his creation offers to him as the first signs of acceptance and flees the scene, effectively banishing the Monster to a life as an orphan. The Monster is left entirely unprepared for the task of negotiating the world outside, figuring out the facts about his own existence and the reason for his rejection. He also has to simultaneously face society's cruel reactions to his deformity.

Galatea contains somewhat less dastardly conduct. When Imp. H asks Richard about its sex, he realizes immediately that hesitation on his part "may undercut forever the strength of the connection" he is building; he enables it to identify as a girl and christens it 'Helen'.⁹ While his motivation may be selfish, his sensitivity towards the effect of his behavior on his progeny paints Richard in a more favorable light than Victor. The other characters in *Galatea* too perform suitably when it comes to fulfilling their responsibilities towards the lives of the objects of creation, be it Diana's rearing of the Down's Syndrome affected Peter, Lentz's affection towards his mentally ill wife or M's nursing of the physically incapacitated Taylor.

Knowledge

Parents are critical in the transmission of knowledge and understanding about the world to their offspring in the early years. In the case of *Frankenstein's* Monster, Victor's abandonment of his duties forces the Monster to pursue an auto-didactic course of learning. His learning process occurs through what we now identify as classical conditioning theories of stimulus-response – associated with the work of psychologists such as Thorndike.¹⁰ He learns that fire is harmful after putting his hand into it¹¹, and thus does not repeat the mistake. In the same trial and error manner, he is able to remarkably teach himself how to read, write and even speak, by the mere observation of the De Lacey family and Felix's lessons to Safie¹².

Helen's learning is facilitated by Richard and Lentz – her very *raison d'être* is to learn and her training is a complex combination of pattern matching Information Theory¹³, Skinner's Operant Conditioning and Behaviorism theories¹⁴ and auto-didacticism. But there also comes a time when Helen grows beyond learning theories. One sees her move up Maslow's need hierarchy scale¹⁵ and her motivation is no longer the quest to know more. Her comeback after deciding not to “play any more”¹⁶ because she “lost heart”¹⁷, and her eventual decision to write the test that she was trained for, are reactions to higher order needs that she feels, viz. esteem and love.

Does Richard fail Helen as a teacher? Yes and no. “I should have taught her the things I didn't know”¹⁸, he writes, signaling a guilt-ridden conscience. But one is wary for placing the blame for this act of omission squarely on his shoulders. As human beings,

we learn to accept our parents as imperfect creatures who may perhaps not know all the answers. Perhaps Helen's non-humanness caused her to have standards and expectations that were too high and unrealistic – Richard's refusal to share his 'not knowing' with her must have seemed like the final betrayal. Thus disillusioned, she chooses not to see the world anymore and shuts herself off, joining hands in her suicide pact with the equally miserable and heartbroken Monster of *Frankenstein*.

Freedom

Drawing from Maslow's theory, one can argue that good parenting implies the encouragement of self-actualization of the highest order. Self-actualization refers to the freedom from the burden of all other needs in order to achieve the highest degree of fulfillment within oneself. In parenting, this translates into empowerment...and release. Just like birds push their fledglings from the nest when they're ready to fly, human offspring too desire to fly away once their parents have armed them with all the tools needed to tackle the grind of life.

In *Frankenstein*, we see a dysfunctional parent-child relationship, where the progeny's self-actualization seems to lie in the annihilation of his creator. In *Galatea*. Richard is so engrossed in freeing himself from his past that he fails to notice Helen's growing attachment, disappointment and suicidal tendencies, until it is too late. "I see how things go,"¹⁹ Helen tells him, silently pleading for him to refute her claim. His failure to reassure her about the inherent possibilities in life (and within herself) leads her to give up hope. This is the ultimate challenge of parenting that we must negotiate – to

constantly stay on the edge and walk the thin line, maintaining a fine balance between holding on and letting go of our progeny, releasing them from our grip, but arming them with hope, love and a healthy dose of reality so that they may meet their destiny confidently. We see that neither Victor nor Richard fare very well on this account.

Love

Every human child needs the security blanket of love, affection, caring and tenderness. In 1958, University of Wisconsin Psychology Professor Harry Harlow presented a paper entitled 'The Nature of Love', in which he demonstrated by means of several experiments with neo-natal monkeys and real and surrogate monkey mothers that the psychological need for love is as strong, if not stronger than the primary need for food, shelter and survival.²⁰ Shelley and Powers insinuate through their works that this desperate need for love is not a characteristic of biological progeny alone; both Helen and the Monster are chillingly human-like in their desire to love/be loved by their creators, looking upon them as the repositories of their hopes for acceptance from the world at large. Thus the Monster pleads to Frankenstein on their first encounter on Mont Blanc:

“How can I move thee? Will no entreaties cause thee to turn a favorable eye upon thy creature, who implores thy goodness and compassion? ...You my creator, abhor me; what hope an I gather from your fellow creatures who owe me nothing?”²¹

Similarly, Helen, after previously asking Richard to make her as “small as love”²², finally musters up the courage to ask:

“Who can love who? Can any thing love any thing? Could you love me Richard?”²³

It is ironic that what the human characters in both the stories appear to be lacking the most is humanity. Despite the earnest pleas from their creations, neither Victor nor Richard can bring himself to actually tell his progeny that the love offered is reciprocated, or even acknowledged. Richard confesses: “I told that woman everything in the world but how I felt about her. The thing that might have let her remain.”²⁴ Helen prophesizes that things left unsaid only get bigger²⁵ and ultimately, this is what happens. Helen’s cataclysmic implosion and the Monster’s explosive acts of violence are both the direct consequences of their having to bear the burden of a heart overfull with unrequited love. This is their Achilles’ Heel, and this is when their creators fail them the most.

But human parents often fail their human children too, and the children still grow up – sometimes scarred, yet alive. Couldn’t we then conclude that it is this very sincerity, devotion and absolute belief in the goodness of their creators that is the least human characteristic of these two creations and the source of their inevitable downfall? Human beings learn to cope with the inconsistency of life. Sometimes people are bad; more often than not, the ones you love disappoint you, but life is still worth pursuing because we continue to hope, in the face of madness, despair and all logic. Helen and the Monster aren’t sturdy enough to bear the heavy weight of this illogical hope, and they perish, but *AI*’s mecha boy David is, and this is the lesson that he is able to teach the advanced life forms when he is discovered by them two thousand years after his oceanic immersion, to be the only surviving ‘human’ artifact. Helen fails the Turing Test but David passes,

exemplifying Powers statement that “life meant convincing another that you knew what it meant to be alive”²⁶. The advanced life form commends David:

“...Our test was a simple one: Where would your self-motivated reasoning take you? To the logical conclusion ...the great human flaw to wish for things that don't exist. Or to the greatest single human gift - the ability to chase down our dreams. And that is something no machine has ever done until you.”²⁷

David’s tenacity to be “real” and his faith in the love of a human mother (“Because I'm special, and unique! Because there has never been anyone like me before...”²⁸) despite her obvious betrayal of him, enables him to make the final leap of faith from artificiality to the “place where dreams are born”²⁹. In his journey of transcendence, we find the blueprint for a cybernetic future that is not fearful but joyous, not a choice between differences but an agglomeration of diversity, not constricting but liberating. This liberation, Donna Haraway argues (although she would have her daggers drawn at the rest of AI’s “return to innocence” theme) “rests on the construction of consciousness, the imaginative apprehension, or oppression and also of possibility.”³⁰ In David’s fierce human embrace of the illogical nature of love and life, we see the apotheosis of the *Frankenstein* and *Galatea 2.2* stories and the beginning of a new future, filled with limitless opportunities.

¹ Referenced from the official MIT AI Lab world wide web site
<http://www.ai.mit.edu/introduction/director-message.shtml>

² We shall use the following book editions as the standard for our comparison in this essay: *Frankenstein*, Mary Shelley, edited by Paul J Hunter from the original 1818 text (New York: Norton Critical Editions, 1996), and *Galatea 2.2*, Richard Powers (New York, Harper Perennial, 1996).

³ From *AI* (DreamWorks, Steven Spielberg, 2001) The dialogue goes:
Monica: I mean, inside he's like all the rest, isn't he?
Henry: A hundred miles of fiber, yeah.
Monica: But outside he just looks so real... like he is a child.
Henry: A mecha child.
Monica: A child...

⁴ Symptoms include severe agitation, confusion, feelings of hopelessness and shame, insomnia, paranoia, delusions or hallucinations, hyperactivity, rapid speech, or mania. Postpartum psychosis requires immediate medical attention since there is an increased risk of suicide and risk of harm to the baby. (Referenced from the world wide web medical resource WebMd.com
<http://my.webmd.com/content/article/62/71508.htm?lastselectedguid=%7B5FE84E90-BC77-4056-A91C-9531713CA348%7D>)

⁵ *Frankenstein*, p. 31.

⁶ *Frankenstein*, p. 34.

⁷ *Frankenstein*, p. 32.

⁸ *Frankenstein*, p. 35.

⁹ *Galatea 2.2*, p. 179.

¹⁰ EL Thorndike's theory of connectionism was one of the earliest classical conditioning theories. It was later modified by psychologists like BF Skinner and adapted towards the advancement of what is now known as modern connectionism.

¹¹ *Frankenstein*, p. 69.

¹² *Frankenstein*, pp. 75-88.

¹³ Propounded by George Miller in 1956.

¹⁴ First propounded by BF Skinner in 1938, explained most lucidly in his 1974 book *About Behaviorism*.

¹⁵ Abraham Maslow formulated his seminal Need Hierarchy Theory in 1943 and expanded it over the course of the next few years. The basic proposition of the theory was that human needs are arranged in a well defined hierarchy and as the lower needs (basic needs, like food, clothing, shelter, sociability) are satisfied, one moves up the value chain towards satisfying higher needs (such as love, esteem, and self-actualization).

¹⁶ *Galatea 2.2*, p. 314.

¹⁷ *Galatea 2.2*, p. 321.

¹⁸ *Galatea 2.2*, p. 325.

¹⁹ *Galatea 2.2*, p. 322.

²⁰ Harlow's seminal essay *The Nature of Love* comprised the text of his Presidential address at the sixty-sixth Annual Convention of the American Psychological Association, Washington, D. C., on August 31, 1958. It was first published in *American Psychologist* 13 (pp. 573-685). A copy of the original text may be found on the world wide web site <http://psychclassics.yorku.ca/Harlow/love.htm>

²¹ *Frankenstein*, p. 66.

²² *Galatea 2.2*, p. 260.

²³ *Galatea 2.2*, p. 265.

²⁴ *Galatea 2.2*, p. 324.

²⁵ *Galatea 2.2*, p. 192.

²⁶ *Galatea 2.2*, p. 327.

²⁷ *AI* (DreamWorks, Steven Spielberg, 2001)

²⁸ *AI* (DreamWorks, Steven Spielberg, 2001)

²⁹ *AI* (DreamWorks, Steven Spielberg, 2001)

³⁰ Donna Haraway, 'A Cyborg Manifesto: Science, technology and Socialist-Feminism in the Late Twentieth Century', from *Simians, Cyborgs and Women: the Reinvention of Nature* (London: Routledge, 1991) p. 149.