# The Cyborg Prophecy: Reading between Isaac Asimov's Lines

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**Abstract:** Donna Haraway's "Cyborg Manifesto" describes the Cyborg as a conjunction of technology and discourse. It argues that a prosthesis becomes a cyborg element when it is integrated with the identity of an individual, and a cyborg is created by the almost symbiotic union of robotic and organic elements. Isaac Asimov, in his short story "The Bicentennial Man" for example, narrates the story of such a remarkable union of robotic and human parts and asserts, at the end, that the resultant system is, essentially, human. A cyborg, therefore, is 'meta-human', being somewhat enhanced (by the use of technology) in certain ways in comparison to a human being. There isa mass cyborgization of the global population taking place today. The kind of blurring of boundaries between exogenous and endogenous parts within the system of a human being that one had, so far, only come across in science fiction, is fast coming to life. The obvious example of prosthetics aside, gadgets like cellphone headsets, touchscreen phones and similar electronic devices have been rendered extensions of the human system, merging seamlessly with the organic identities and consequently, making cyborgs out of everyone. The relevance of literature featuring cyborgs, which have, in a way, acted as prophecies for human civilization, therefore cannot be emphasized enough. This paper explores the cyborg identity in select works of Isaac Asimov and reflect on the fast occurring cyborgization of the (meta-)human race in reality.
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Donna Haraway, in the famous "Cyborg Manifesto," describes a cyborg as a conjunction of technology and discourse (Haraway 149). A cyborg, in other words, is created by the almost symbiotic union of organic and mechanical elements. It is, therefore, a sort of 'meta-human', its human state having been enhanced by the incorporation of an external technological entity into its organic system. This incorporation of technology and its resultant enhancement in the functioning of the human species has transformed from a miracle of science to a fact of life in present times, thus resulting in a kind of mass cyborgization of the global population. The blurring of boundaries between man and machine is something that was first noted in the pages of Science Fiction texts, and has, since then, come to life, thus altering the course of history to resemble something out of these texts. This paper aims to explore the Cyborg Identity in select works of the prolific scientist and science fiction writer, Isaac Asimov, and reflect on the fast-occurring cyborgization of the (meta-)human race that human beings seem to have evolved into, as well finding points of interaction between Asimov's fiction and reality.

In 1976, Isaac Asimov wrote the novella "The Bicentennial Man," focusing on this issue of robotic and human union. In the text, Asimov writes about the journey of a robot who gradually, with the use of technology, comes to resemble a human being. His transformation is so complete that when he finally wants a fatal surgery so that he can have the ultimate human experience – death – the robotic surgeon refuses him the surgery

by saying that it would be a violation of the First Law of Robotics (*The Bicentennial Man and Other Stories* 110). The First Law states that a robot cannot harm a human, and the robotic surgeon, assuming Asimov's protagonist Andrew Martin to be a human, cannot perform a fatal surgery on him. While this story is an exception to most Cyborg Fiction because it shows the gradual incorporation of human parts into a robotic entity, Andrew Martin is ultimately recognized as a human being at the end of the story, albeit one with mechanical enhancements. Andrew does, therefore, fit well within the definition of a Cyborg. He is, in a sense, both meta-robotic as well as meta-human, since he is more than both identities individually. Asimov's brilliant portrayal of Andrew Martin occupying a strange twilight zone between human-ness and robot-ness won him both the Hugo Award and the Nebula Award for Best Science Fiction in 1976.

Marisa Olson, in her essay "Viva Cyborg Theory," comments on cyborgization by mentioning that "there were no [longer] separations between bodies and objects. Our life force flows through us and out into the objects we make ..." (Olson). This directly relates the cyborg identity with the act of creation. The Bicentennial Robot-Man's journey into cyborghood also begins with an act of creation. Andrew's master notices a pendant that the entirely robotic Andrew has carved out of wood, and decides to begin his partial humanization. Andrew's artistic skills, or his ability to create, is what sways his master's mind about creating a more human identity for him. His transformation, therefore, is triggered off by a certain "life force" - not unlike what Olson talks about. This force flows from his robotic identity into the creation of art he claims to "enjoy doing" (*Bicentennial Man* 112). Olson continues that "there ought to be no distinction between the so-called real or natural organisms that nature produces and the artificial machines that humans make" ("Viva Cyborg Theory"). There is a certain creator-creation balance that is intrinsic to the human identity which blurs the line between nature and machine. Even before any of the more humanoid features are added to Andrew's system, he becomes more than a robot the moment he finds himself a part of this creator-creation set-up. While his creations begin with woodwork, it is by no means restricted to it: his first trip to the library is made with the intention of writing "a history about robots" (*Bicentennial Man* 123), and he devotes himself to extensive research in an attempt to build, or create for himself human-like biological functions as well as organs, and largely succeeds in doing so. The process of creation, therefore, is something that accompanies him every step of the way in what may be called his journey towards (meta-)humanization.

As a machine, it was when Andrew created art that he was first identified as something more than a robot, something more akin to human beings perhaps. On the other hand, human beings themselves fail to create art without machines. Artistic creations these days are very heavily machine-dependent. Whether it is Photoshop or Installation art which makes extensive use of machines or HD Cameras or 3D films made using a Green Screen. It would seem that technology is, in a way, what enables us to create art, which is supposed to be a deeply personal expression of a human individual. Even a basic tool like a paintbrush or a pen performs basic mechanical function. Humans, therefore, achieve the fruition of what is a natural impulse – that of art – through machines, which can, therefore, be called an extension of the human identity in these cases. A perfect example of this is the work of sculptor Tim Hawkinson known for

making detailed installations which make use of technology. In 2005, a special exhibit of Hawkinson's art was on display at the Whitney Museum of American Art. The exhibition curator, Lawrence Rinder, elaborated on Hawkinson's style by saying

> Tim Hawkinson's fantastical works suggest the profound strangeness of life, matter, and time. Interweaving images of bodies and machines, at scales that vary from the monumental to the nearly microscopic, Hawkinson conjures a world that teeters on the cusp between the real and unreal ("Tim Hawkinson").

Hawkinson's style, therefore, incorporates machines as well as organisms to create a blurring of real and unreal, of the exogenous and the endogenous elements that unite to create cyborg entities. It may be argued that his art is Cyborg art in itself. Keeping in mind Andrew Martin from Asimov's tale, who first became meta-robotic through his creation, it may also be argued that Hawkinson becomes meta-human through his art that blends man and machine so seamlessly.

"The Bicentennial Man" is also a perfect example of what could be called the fictional origin point of Cybernetics as a field. Cybernetics may be defined as a transdisciplinary approach for exploration of regulatory systems, structures, and possibilities, that is significant for the study of mechanical, physical, biological, cognitive, and social systems ('Cybernetics'). In Asimov's story, the creation of one cyborg includes many approaches, which bring together fields of science, arts, law, etc. Andy Clark, in his book, *Natural-Born Cyborgs: Minds, Technologies and the Future of Human Intelligence*, writes that

> …the human brain is nature's great mental chameleon. Pumped and primed by native plasticity, it is poised for profound mergers with surrounding webof symbols, culture and technology. (197)

By this logic, the infinitely adaptable human brain is inclined to cyborgization and is, ultimately, the true seat of cybernetics. In fact, Asimov himself wrote that "it is the brain, then, that is the sticking point in going from human organism to robot" ("Cybernetic Organism"). For Asimov, then, the brain is a versatile instrument that can transgress and retain the authenticity of human-ness simultaneously. Asimov, in his essay, brings up the subject of "The Bicentennial Man" where, even though Andrew Martin works increasingly hard to achieve a state equivalent to – and perhaps, even superior to, at times – human beings, he has trouble making himself "accepted as a man" ("Cybernetic Organism"). Ironically, at the end of Asimov's story, Andrew had trouble in making himself accepted as a robot by the robotic surgeon, indicating that the cyborg exists in a liminal third space of its own.

Like cybernetics, cyborgs too originate in the pages of fiction, but have come to life through technological advancements. As early as 1879, Edward Page Mitchell wrote the short story, "The Ablest Man in the World," about a clockwork brain put inside the skull of a retarded man, thus turning him into a genius. The idea of using machines to enhance human functions, therefore, dates back to a century before Asimov wrote "The Bicentennial Man." Haraway, in her Manifesto, wrote that a prosthesis becomes a cyborg

element when it is integrated within the identity of an individual. Like Baron Savitch in Mitchell's story, who would have been restricted to a vegetable existence had it not been for the intervention of his doctor, modern medicine too has given life to many who were perhaps not retarded like Savitch was, but whose genius would have remained untapped had it not been for the timely inclusion of technology into their lives. The most notable example of this is Stephen Hawking, who was diagnosed with a motor neuron disease when he was only 21 ("Stephen Hawking"), when he was given two years to live. It is what can only be called a miracle of science that has kept him alive till date, despite having lost the capacity to move or speak or write. He is now 71 and communicates by using a machine where he can select the words by a twitch of his cheek muscles. While this takes a very long time, it is without a doubt a better alternative than losing the brilliance of Stephen Hawking to illness. Hawking's wheelchair, equipped with technologies for most functions that he would have needed to perform had he not been ill, is so completely a part of his identity that it makes him a meta-human in many ways.

Hawkins is only one example, albeit an illustrious one, of what modern medicine is achieving through what can only be called cyborg technology. People are kept alive on life support systems, robotic arms with incredible functionality are used both to perform surgeries and as implants on people who have suffered the loss of limbs, pacemakers are used to make a heart function properly, hearing aids and lenses are incorporated to heighten failing senses. In short, technology has transcended the boundaries of fiction and reality simultaneously as it transgressed the borders between man and machine. Haraway, in fact, goes on to write in her Manifesto about how

> Contemporary science fiction is full of cyborgs - creatures simultaneously animal and machine, who populate worlds ambiguously natural and crafted. Modem medicine is also full of cyborgs, of couplings between organism andmachine. (149- 150)

Her words are a reflection on the curious relationship between science fiction and medicine, where what the former imagined is being made feasible by the latter: the cyborg is now truly "a creature of social reality as well as a creature of fiction" (Haraway 149). In an age where prosthetic arms, hearing aids, contact lenses, machines which measure how many calories we burn while we run are but an extension of our organic bodies, her words hold very true. The older idea of the Cyborg, not very unlike what was found in the pages of science fiction novels, might not hold good, but a newer, perhaps improved breed of cyborgs were coming into being:

The word cyborg once conjured visions of wires and implants, but as we have seen, the use of such penetrative technologies is inessential.... What matters is our obsessive, endless weaving of biotechnological webs: the constant two-way traffic between biological wetware and tools, media, props and technologies (Clark 198).

It could be argued that the idea of a cyborg comes from our age-old fantasy to be superhuman, to go beyond the weaknesses that we associate with being fragile and human. Whatever it might be, we have, today, arrived at a point where almost none of us are simply human, our existences being augured or enhanced by technology in one way

or the other. It is undeniable that on some latent level, the inspiration for cyborgs comes from works like those of Asimov, where for the first time the boundaries of elements outside and inside the body were so easily transgressed long before one was equipped to do so in real life.

However, as such 'assimilated' entities composed of robotic and human parts become more and more common in our times with the advancement of technology, certain questions are bound to come up and they are, in the field of Body Studies. Bruno Latour, in his book *We Have Never Been Modern,* discusses the "proliferation of hybrids" (1). This problematizes body politics to a great extent. It raises questions of when it is that we start being more robotic than human, and how that affects the laws that determine our existence. If we are to look at Science Fiction once again – since it almost takes on a soothsaying capacity in so far as cyborgs are concerned – there might come a time when we would need laws to separate humans from robots, perhaps depending on the percentage of machines or organic parts in a cyborg entity. Where do we place these assimilated entities in the human-robot spectrum? Do we recognize the cyborg population as a different species, which is multiplying in number every day? Do we give them rights? Asimov's writing predicted these and other problems that would come in with the advent of the cyborg population, making his work prophetic in more than one ways. How does a cyborg offer proof of his humanity? Asimov asks:

> The easiest way for a cyborg to offer the proof is for him to demonstrate that he is not bound by the Three Laws of Robotics. Since the Three Laws enforce socially acceptable behavior, this means he must demonstrate that is capable of human (i.e. nasty) behavior. The simplest and most unanswerable argument is simply to knock the challenger down, breaking his jaw in the process, since no robot could do that. ("Cybernetic Organism")

Asimov, in fact, uses this exact principle in one of his own stories, "Evidence"; set in 2032, the story hinges itself upon this exact crisis of how to prove whether an individual is a robot or a human, or something else altogether. The story starts with Francis Quinn, a political king-maker, who wants to discredit a mayoral candidate by the name of Stephen Byerley. At this point in Asimov's fictional universe, robots are not allowed on Earth. So, Quinn decides to spread the rumour that Byerley is a robot, which is strengthened by the fact that the latter is never seen eating or resting in public and has had an accident in the past from which he was known to recover rather slowly. Amidst the debate of trying to prove Byerley's human-ness, it is said that "Robots are essentially decent" (*I, Robot* 87), indicating that their laws forbid them from indulging in violence. However, it is when robotic elements combine with the human capacity for destruction that trouble begins. As military warfare advances everyday, and soldiers are fitted with more and more mechanical parts, rendering them into efficient killing *machines*, the words of Asimov's 1947 stories are prophetic to say the least.

The story continues debating the nature of proof that Byerley can produce to define his human-ness: it can be proved only if he harms somebody. If he refuses to do so, he could either be a robot, or a decent human being. Eventually, after being insulted at a political rally and instigated, Byerley hits a man (*I, Robot* 271), thus proving himself to

be a human being whose acts are in violation of the First Law. The story concludes without any other real evidence, but Asimov's brilliance lies in the fact that he points out certain facts for the reader's benefit: that Byerley could have hit the person at the political rally if he had also been a robot, that Byerley was atomized after death leaving no way to conclusively prove whether he was man or robot, and that he was an excellent leader and the first World Co-ordinator when the Machines were helping to run the Earth (*I, Robot* 305). The ambiguous ending of the story only serves to heighten the curiosity. Perhaps Byerley was a robot, perhaps he was a man, or perhaps he was both. After all, Asimov's story does mention that it is possible to grow some cells over a robotic interior. Perhaps then, Byerley was also one of the early cyborgs in Asimov's fictive realm.

This story also echoes the kind of uncertainty of attempting to categorize a cyborg. Until the debate over Byerley's identity is cleared up, there is chaos among people. And the moment he hits a man at the rally – proving himself, at least for the sake of public memory, to be a fallible human being – problems cease, and he is elected mayor. Living in a world where cyborgs are increasingly becoming a part of our everyday life, questions of being targeted for not being human enough are very much a possibility. Asimov himself writes that he suspects that "the cyborg will still have his troubles. He'll be *different.* No matter how small the difference is, people will seize upon it" ("Cybernetic Organism"). While this crisis has yet to arrive, the visionary nature of Asimov's works makes one wary all the same, given that the essay "Viva Cyborg Theory" reminds us that "The future is already here" (Olson).

Here, one must take a look at another Asimov story, "The Segregationist," written in 1967, where a robotic surgeon (who is not revealed to be a robot till the end of the story) operates on a man who is getting a robotic high-performance heart. The surgeon tries to persuade the man to get a semi-organic heartbut the latter refuses, instead picking a metallic heart (*Nightfall and Other Stories* 282). The patient insists that metallic hearts have been known to work for a longer time, and the semi-organic "cyber-hearts" (281) are relatively new hybrid technology and using them would be a greater risk. The doctor accepts his decision. After the patient leaves, he discusses the patient's decision with a medical engineer robot. The medical engineer discusses how humans and robots should be allowed to approach each other and be allowed to use advantages of both existences and become a combination of both (283-284). The doctor calls this "mongrelization" (284) and asks why someone would want it: "Isn't it logical to suppose an individual would be too proud of his structure and identity to want to dilute it with something alien?" (284) His colleague calls him a segregationist for this sentiment, and it is eventually revealed – again, through Asimov's mastery at showing but not telling – that the doctor is a robot.

These questions of segregation are yet to arise in reality, although one must wonder how long till they do. Perhaps we are heading towards a society where there could be a new form of racism amidst the races of men and that of the 'mongrelized' cyborgs. The advent of cyborgs lead, as Clark points out, some people to fear a post-human future. They predict a kind of technologically incubated mind-rot, leading to loss of identity, loss of control, overload, dependence, invasion of privacy, isolation and ultimate rejection of the body (198).

At the rate the man-machine divide is being obliterated, it is only a matter of time before human beings are too robotic to be humans any more. They would, however, still fit in within both meta-human and meta-robotic categories, being neither as well as being more than any one category. It is, however, a future that is yet to be realized. For now, however, Haraway's words serve as a premonition for such a future: "The cyborg is our ontology; it gives us our politics" (Haraway 150).

In conclusion, it must be noted that Asimov's texts are all from the first half of the last century and are now rather dated. This is, perhaps, because Cyborgs are no longer restricted to the pages of science fiction and thus, can no longer be used as fodder for futuristic writing. Today's science fiction must strive to cover newer grounds, make newer prophecies like Asimov made in his time. Within Asimov's texts as well, the readers can note a changing sensibility towards cyborgs, perhaps borne out of the realization that they are increasingly closer to our reality. Now, cyborgs are material for medical journals or military reports or even, simply day-to-day existence, wherein a GPS dictates our movements, headphones or Bluetooth physically attach themselves to our bodies as we go out into the world every day. In a way, our time has become a cyborg, incorporating nature with machines, allowing the two to interact and create a new entity. On this note, one must return to Haraway's Manifesto, wherein she predicts that

> By the late twentieth century, our time… we are chimeras, theorized and fabricated hybrids of machine and organism; in short, we are cyborgs.(Haraway 150)

And now, a decade or two later, we have perhaps arrived at the point where we are all cyborgs.

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